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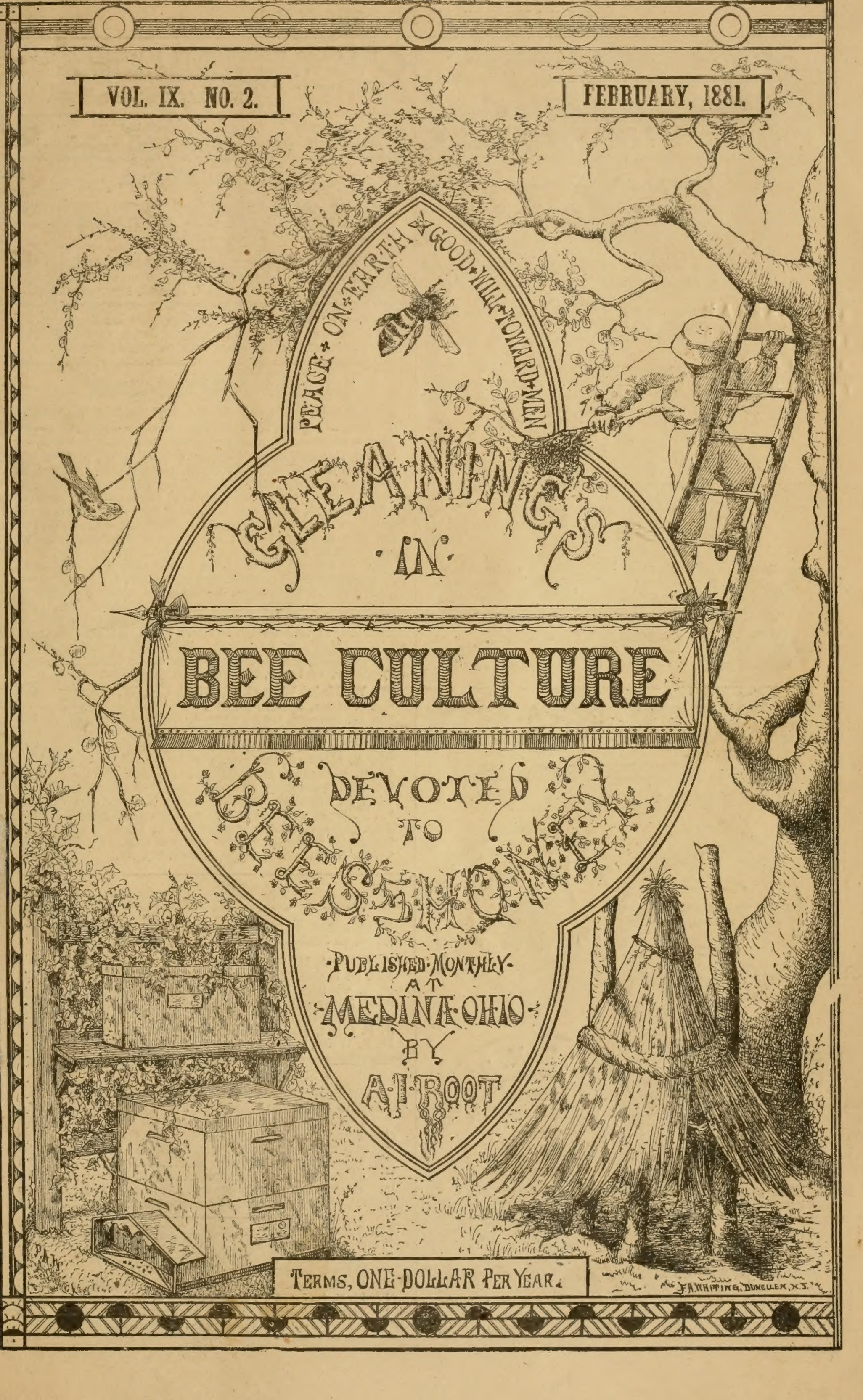
PEACE ON EARTH GOOD WILL TOWARD MEN
F.A.WHITING, DUNELLEN, N.J.

VOL. IX. NO. 2.
FEBRUARY, 1881.

GLEANINGS IN BEE CULTURE

DEVOTED TO BEES & HONEY

PUBLISHED MONTHLY
AT
MEDINA, OHIO
BY
A. I. ROOT

TERMS, ONE DOLLAR PER YEAR.

ADVERTISEMENTS.

We require that every advertiser satisfy us of responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them. In fact, I hold myself responsible for every advertisement on these pages.

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All advertisements will be inserted at the rate of 20 cents per line, Nonpareil space, each insertion. 12 lines, Nonpareil space make 1 inch. Discounts will be made as follows:

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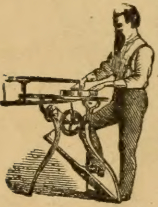

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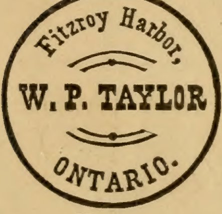

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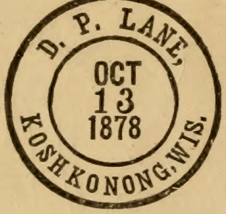

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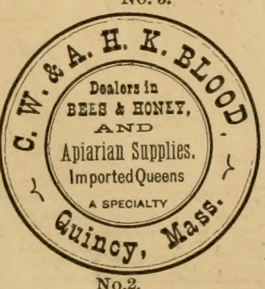

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Address only, like No. 1, $1.50; with business card, like No. 2, $2.00; with movable months and figures for dating, like No. 3, $3.00. Full outfit included—pads, ink, box, etc. Sent by mail postpaid. Without ink and pads, 50c less.

Put your stamp on every card, letter, paper, book, or anything else that you may send out by mail or express and you will save yourself and all who do business with you "a world of trouble." I know, you see.

We have those suitable for Druggists, Grocerymen, Hardware Dealers, Dentists, &c., &c. Send for Circular. A. I. ROOT, Medina, Ohio.

OLM COMB FOUNDATION MACHINES, from $15.00 to $35.00. Sample and Circular sent free on application. Address,
9tfd C. OLM, Fond du lac, Wis.

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$15.00 TO $100.00.

SAMPLES OF FOUNDATION WITH OUR ONE POUND SECTION BOX BY MAIL FOR FIVE CENTS.

For illustrations see our Illustrated Catalogue of Apiarian Implements and Supplies, mailed on application. A. I. ROOT, Medina, Ohio.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Wirt C. H., Wirt Co., W. Va.	2-1
*A. I. Root, Medina, Ohio.	
*H. H. Brown, Light Street, Columbia Co., Pa.	1tf
*E. M. Hayhurst, Kansas City, Mo.	1-12
*Paul L. Viallon, Bayou Goula, La.	1tfd
*D. A. McCord, Oxford, Butler Co., O.	1-12
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*B. Marionneaux, Plaquemine, Iberville Par., La.	55
*Jas. P. Sterritt, Sheakleyville, Mercer Co., Pa.	6-2
*J. T. Wilson, Mortonsville, Woodford Co., Ky.	6-6
Jno. Couser, Glenn, Johnson Co., Kan.	7-2
*Chas. G. Dickinson, Sou' Oxford, Chen. Co. N. Y.	1-10
*Wm. Ballantine, Sago, Musk. Co., O.	2tfd

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

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Sid. D. Buell, Union City, Branch Co., Mich.	2-7
P. L. Viallon, Bayou Goula, Iberville Par., La.	1tfd
S. F. Newman, Norwalk, Huron Co., O.	1tfd
Sprunger Bro's, Berne, Adams Co., Ind.	3-2
J. F. Hart, Union Point, Greene Co., Ga.	4-3
M. S. West, Pontiac, Oakland Co., Mich.	8-1

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We will send GLEANINGS—

With The American Bee Journal	($2 00)	$2 75
" The Bee-Keeper's Magazine	(1 00)	1 50
" The Bee-Keeper's Exchange	(75 c.)	1 50
" All three of the above Journals		3 50
" Bee-Keepers' Instructor	(50 c.)	1 30
" Bee-Keepers' Guide	(50 c.)	1 30
" American Bee-Keeper	(1 00)	1 80
All above (Bee Journals of America)		5 25

With American Agriculturist	($1 50)	2 25
" Prairie Farmer	(2 00)	2 75
" Rural New Yorker	(2 50)	3 25
" Scientific American	(3 20)	3 90
" Fruit Recorder and Cottage Gardener	(1 00)	1 75
" U. S. Official Postal Guide	(1 50)	2 25
" Sunday School Times, weekly,	(2 00)	2 25

[*Above rates include all Postage.*]

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To send for Moore's 4th annual circular of Perfection Honey-Box, Italian and Cyprian Queens; Paper for separators, &c. Address

1d J. E. MOORE, Byron, Gen. Co., N. Y.

OUR NEW ILLUSTRATED DESCRIPTIVE CIRCULAR of Italian, Cyprian, and Holy-Land Queens; also club rates of bee publications, sent free. Send your name on postal card to

1 EDWARD B. BEEBEE, Oneida, N. Y.

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The Hetherington Brothers are the largest Bee-Keepers in the U. S. Bingham & Hetherington smokers and Honey-Knives were the only ones at the last American Bee-Keepers' Society; also at the Michigan State Society. They were invented for our own use in our own apiaries, and patented to secure us the credit of their invention, and the means of advertising them so as to guard bee-keepers against worthless imitations. There are no other smokers advertised which were not made by supply dealers, and not for their own use. Twenty thousand of ours are in use in the best apiaries. *All praise them as best. None complain.* We are the only legal makers of them, and we sell no other supplies. We are proud of them. Send card for circulars or wholesale rates to

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1d Otsego, Michigan.

1881.— —1881.

Italian, Cyprian, AND HOLY-LAND QUEENS!

Single Queen, Tested	$2 00
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Sent by mail and safe arrival guaranteed.

8 Frame Colony	6 00
3 " Nuclei	3 00
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Safe arrival guaranteed by express.

Address W. P. HENDERSON,
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To send a postal card for our Illustrated Catalogue of

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Before purchasing elsewhere. It contains illustrations and descriptions of every thing new and desirable in an apiary,

AT THE LOWEST PRICES.

Italian, Cyprian, and Holy-Land Queens and Bees.

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1-8d Hartford, Washington Co., Wis.

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I will send postpaid to any address in the United States, ten cuttings of the willow on which the kill-monark is budded, 6 inches long, assorted from ⅛ to ⅜ of an inch in diameter, on receipt of 25 cts; or 12 cuttings, 8 inches long, for 30 cts.

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1d Hilliards, Franklin Co., Ohio.

CHEAP SECTIONS!

All One-Piece Sections. Pound and Prize size at $4.50 per 1,000. JOHN McGREGOR,

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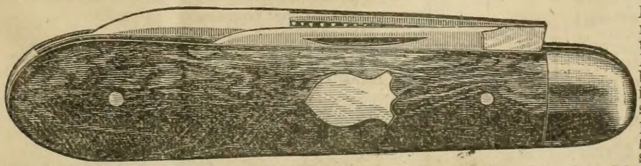

MAHER & GROSH, 34 N. Monroe St., Toledo, Ohio, ask your attention to their brand of *Hand Forged, Razor Steel* Cutlery, every blade warranted and replaced *free*, if soft or flawy. Cut shows exact size of medium 2-blade Knife, price by mail, post-paid, 50c; larger and stronger Knife, 60c; extra strong 2-blade, made for hard service, 75c; *Our Best*, oil temper and tested, highest finish, $1. One blade size of cut, 25c; extra strong 1-blade, 50c. Ladies' small 1-blade Pen Knife, 25c; 2-blade 50c. *Pruners*, oil temper and tested, $1. Hunting Knife, $1.00. Illustrated list of Knives, Razors and Scissors free. Address as above. Sample 6-inch, hand forged Butcher Knife, 50c., or Chicago Stock-Yard Skinning Knife, 75c. 10-12

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COUNTER STORE.

Our friends will bear in mind the price of single articles are given at the head of each list, and that the figures refer only to lots of 10 and 100.

FIVE-CENT COUNTER.

Postage.]		[Pr. of 10,	of 100
10	Brackets to hold clock-shelf	45	4 25
2	Copper Wire, on spools; suitable for mending things when they get broken	40	3 50
6	Hammer, Tack, coppered; iron handle	40	3 50
4	Hammer, Tack; wood handle	35	3 00
16	Hammer, Carpenter's, full size	45	4 25
1	Pencils, red one end blue the other, the best pencil of American Lead Pencil Co	40	3 50
2	Handkerchiefs, all-linen; good size; fine, and neatly hemmed	45	4 25
2	Knives and Forks, small size, and very neatly finished, knife and fork are two	45	4 25
7	Pie-plates, Tin; just right for pumpkin pies	40	3 50
4	Tablets, Suitable for writing and counter-slips; on excellent writing paper	40	3 50

TEN-CENT COUNTER.

20	Coal Shovels, wrought iron, with a tin-covered handle to prevent their getting hot	85	8 00
10	Egg-beaters, single-geared; a wonder for the money	85	8 00
	Butter-Dishes, individual; glass, 3 for 10 cents	25	2 25
2	Handkerchiefs, all-linen; good size for gentlemen	90	8 50
2	Knives for boys, Two-bladed; although the blades are not American make, they are steel, and a wonder for the money	95	8 50
	Pencils, 1 doz. for 10c. Am. Pencil Co; and very fair pencils (doz. packages)	75	7 00

FIFTEEN-CENT COUNTER.

	Combination Salt and Pepper, gives both or either condiment at pleasure	1 40	13 00
	Honey or Syrup Cup; glass, with hinged tin cover	1 20	10 00
	Berry Comports, no foot; glass; very pretty	1 30	12 50
	Butter-Dish, on foot; glass; a very nice piece of work for the price	1 30	12 50
7	Wire-ringed Pot-Cleaners, The celebrated Iron-Dish Cloth	1 20	10 00

Twenty-Five Cent Counter.

	Clock Oil, an excellent oil for clocks, watches, or any light or delicate machinery	2 00	18 00
2	Counter Brushes, a neat and useful article	1 75	16 00
13	Family Egg-beaters, double geared; a regular fifty-cent article	1 75	16 00
16	Lantern, Convex reflector; a very good lantern for only 25 cents	2 10	20 00
36	Twine Boxes, ironed japan	2 00	18 00
20	Vise to screw on the bench, with anvil	2 25	21 00
	Wheat-bread plates, glass; has the motto, "Give us this day our daily bread," blown in the glass around the edge; a most beautiful plate	2 00	18 00
48	Clothespins, best wooden, 6 doz. in a basket, basket and all, only 25c	1 60	15 00
2	Watchmaker's Eye-glasses, a most useful magnifying-glass for a variety of purposes	1 50	14 00

Thirty-Five Cent Counter.

	Glass Pitchers, ½ gallon, very handsome	2 80	25 00
	Berry Comports, glass, on foot; a most beautiful article	2 50	22 50
26	Hunter's Sifter. The regular price is 75c. A rotary flour and meal sifter, mixer, scoop, measure, weigher, egg-beater, rice-washer, pumpkin, tomato, starch strainer, etc	2 80	25 00
30	Vises, Iron parallel jaws, 1½ inch wide, to screw on table or bench, very handy	3 25	31 00

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60	Coffee-Mill with a covered hopper. Extra nice	6 00	55 00
2	Silk Handkerchiefs, Beautiful	7 00	65 00

ONE DOLLAR COUNTER.

64	Wrenches, Coe's pattern, malleable, black, 15 in. long, extra heavy and strong	7 50	70 00

A. I. ROOT, Medina, O.

THE A B C OF BEE CULTURE.

Bound in paper, mailed for $1.00. At wholesale, same price as GLEANINGS, with which it may be clubbed. One copy, $1.00; 2 copies, $1.90; three copies, $2.75; five copies, $4.00; ten copies, $7.50.

The same, neatly bound in cloth, with the covers neatly embellished in embossing and gold, one copy, $1.25; 2 copies, $2.40; three copies, $3.50; five copies, $5.25; ten copies, $10.00. If ordered by freight or express, the postage may be deducted, which will be 12c on the book in paper, and 15c each, on the book in cloth.

Cook's Manual in paper or cloth at the same price as above.

A. I. ROOT, Medina, O.

"W. O.'S" INK.

In 2 oz. bottles, black, violet, or blue, in ¼ gross boxes, per gross........ $4 00

In quantities of 5 or more gross, $3,20 per Gross.

In Pint Bottles, per doz		$3 00
In Quart " " "		6 00
In Gallon Jugs " "		12 00

Green and Red ink are necessarily more expensive, and the price will therefore be *one-half more.*

Liquid Bluing, in 6 oz. bottles, per doz		50
" " " " "	gross	$5 40

I will send ¼ gross, 2 oz. inks, assorted colors, black, blue, violet, and one bottle each of green and red, as a trial order for $1.00.

WM. OLDROYD, Columbus, Ohio.

THE
British Bee Journal.

The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan. 1881. Will guarantee safe arrival of every No.

A. I. ROOT, Medina, Ohio.

IMPROVED
Langstroth Hives.

Supplies for the Apiary. Comb Foundation a specialty. Being able to procure lumber cheap, I can furnish Hives and Sections very cheap. Send for a circular.

A. D. BENHAM,
Olivet, Eaton Co., Mich.
2tfd

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50 FINE MIXED CARDS, with name, 10 cents, postpaid. M. L. DORMAN, Sinclairville, Chaut. Co., N. Y,
12tfd

JOIN our club and get *free* one pound package of a NEW SEEDLING potato—the finest we ever saw—or 20 Strawberry plants of varieties that sell for 50c to $1 per doz. Particulars free.
1-2 P. SUTTON, Ransom, Lack'a Co., Pa.

WANTED.—An experienced apiarist; one who can do all kinds of farm work, and handle tools to some extent. Single man preferred. Applicant must be of good habits, a "man of activity," and ready and willing to take hold of whatever turns up. Address immediately, W. P. CLEMENT,
1d Monticello, Green Co., Wis.

FOR Catalogue and Price List of young Sourwood, Black Locust, Buckthorn, Buckbush, and other forest trees and seeds,
Address CHAS. KINGSLEY,
1-2 Greeneville Greene Co, Tenn.

KIND WORDS FROM OUR CUSTOMERS.

I am very much pleased with the Sunday-school books you sent. AUSTIS M. MAGEE.
Coopers, Chilton Co., Ala., Dec. 7, 1880.

I received my watch to-day, Dec. 22, and it is a beauty; and let me thank you for it, for it is just the watch you said it was. H. C. KERSTEN.
Brooklyn, Iowa.

The ink-powder, gauge, and file, came all right today; ink is made, and I am writing with it. It flows well. P. D. S. GREENE.
Barry, Pike Co., Ill., Dec. 13, 1880.

I want to say this, that the 15c coal-shovel, though the handle got broke in the mail, is still worth twice the money. If you only could send tongs to match it! If you get any tongs before my box of goods leaves, put a pair in. ISAAC B. RUMFORD.
Bakersfield, Kern Co., Cal., Dec. 12, 1880.

The goods came last Saturday. The charges were $1.35. That was very reasonable, I think. The extractor is just splendid—much nicer than I expected it to be, and the box of bee material was all packed in good shape. A. OSBUN.
Spring Bluff, Wis., Nov. 23, 1880.

Inclosed find $1.00 for GLEANINGS another year. Thanks for the Home Papers. They help us in Western Connecticut to be unselfish, and thoughtful of others. May the "great Lover of us all sustain and keep" you until you come to his everlasting kingdom. MRS. A. E. JORDAN.
Redding, Ct., Nov. 25, 1880.

The A B C book came to hand. The paper, printing, and binding, are all that could be desired, and yet $1.25 pays for it all! The minute precision of its details makes it a handy book for the novice in bee culture, and is a guarantee of sound information and instruction. GEO. H. WADDELL, M. D.
Coronaca, Abbeville Co., S. C., Nov. 19, 1880.

The Waterbury watch ordered on the 8th inst. arrived safely on the 16th. Thanks. To say that I am pleased with it, does not express the full truth of the matter (I do not wish to beggar the English language.) What a revolution there is in watches! and they keep on revolving (?) providing we keep them wound up. D. P. LANE.
Koshkonong, Wis.

I was much pleased with the several small articles. They are cheap, if they are what they appear to be, and I have no doubt they are, for I have sent to you several times, and was always well pleased, and will risk sending to you once more. I was especially pleased with your ten-cent balance. Send me two more. W. L. MILLSPAUGH.
Catherine, Schuyler Co., N. Y., Nov. 22, 1880.

I received the watch on the 14th inst., all safe. I wound it up and started it in 2½ minutes after I got it, and it has run to a minute with my clock ever since. I am well pleased with it. You may look out again for orders. I also received the scissors and GLEANINGS for December. Thanks for your promptness. J. D. COOPER.
Traveller's Rest, S. C., Dec. 16, 1880.

The A B C book is received, and my wife and I are very well pleased with it. I can hardly see how such a nice book can be sold for so little money. Book-keepers in these parts would charge $2.00 for just such a book. All the goods that I have ordered from you have been received, and give good satisfaction. They were also packed in the best of order. D. F. C. HAMBLEY.
Spanish Ranch, Plumas Co, Cal., Nov. 16, 1880.

BE YE TEMPERATE IN ALL THINGS.

Inclosed find 45 cents, the price for sending 5-cent Sunday-school books for 8 weeks. I think they come weekly, the same as a newspaper. I would rather they would come so, even if I had to pay a little more postage; for, although I think that I am strictly temperate, as far as the use (or, rather, the disuse) of ardent spirits is concerned, but not always so when I have too much on hand at once to read.
White House Station, MRS. WALTER SMITH.
Hunterdon Co., N. J., Dec. 16, 1880.

I can not for my life understand why any single subscriber can ask for GLEANINGS at club rates, or complain at you for allowing a small margin to agents. If they want the profit, they should get up the club. Perhaps a great many complain just for the fun of a growl; if so, just let them growl on, as it perhaps enables them to sleep better. GLEANINGS is worth a dollar, without the Home Papers; and they alone are worth more than a dollar a year without the bee department. ENOCH ARWINE.
Bean Blossom, Brown Co., Ind, Dec. 14, 1880.

The above order I culled out of the pamphlet you sent to Miss M—— last week. About bees—ahem! she wants to know if you can not send her some Italian queens for samples on trial!!

N. B.—I am innocent if there be a joke in the matter. A. B. C.
Medway, Greene Co., N. Y., Nov. 29, 1880.

[Why, friend A. B. C., I am really sorry to refuse to oblige Miss M.; but you see it is such awful hard work to raise queens, that, if we did that with all the brothers and sisters, there wouldn't be enough to go round; at least I am afraid there wouldn't, and you know I am of a careful turn of mind. Ahem!]

The two Sunday-school books that you sent me of late we all like very much, and are hungry for more. The names of those two were "Pilgrim Street," (God help us all to gain the victory as little Tom did!) and "General Peg and Her Staff." I enjoy reading GLEANINGS as much as ever—especially "Our Homes." My prayer is, that God will continue to bless our Christian friends in India. I felt sorry for you when I read the Growlery of this month, because J. A. Hopkins had such bad luck with his perchases. We like our little thermometers very much, and Edward Carson thinks his little 15c plane as near perfect as any thing could be for the price. MARY E. HARTWELL.
Medora, Macoupin Co., Ill., Dec. 6, 1880.

The A B C book came to hand all right, and after reading it all through once, and some of it twice, I think—well, I will just tell you what I think.

I think, friend Root,
You made a pretty good shoot
When you undertook
That A B C book;
And we all should peruse,
With joy profuse,
A book so free
In its knowledge of the bee.
And long may you live.
And happy should you be,
In such a book to give,
As the A B C.

W. H. TURNER.
Fifes, Goochland Co., Va.

I would as soon be without an almanac for 12 months as to do without your bee journal. I do not write for it, for I do not want to be consigned to either the Growlery or Blasted Hopes. I can not boast of as much as some of your people do; yet I concede that I am doing far better since I adopted the Simplicity hive and got the Italian bees than I ever did before. But while I can not boast of as much as some do, I love to read their reports. And now, brother Root, don't ever give up the Home Department. you do not know the good that you are doing. It will tell in eternity. Toil on and the Lord will bless you. E. E. SMITH.

Settle, N. C., Dec. 3, 1880.

I see, by last No. of GLEANINGS. that our year is ended; and my husband would about as soon think of dispensing with his dinner as your useful paper; and so, liking to give him pleasant surprises, I write and inclose one dollar for the coming year. Besides, I have felt a "big drawing" to pen you a few lines this long while, to "sort of rest" you again when you sit down after a hard day's work, with your slippers and dressing-gown on, and your feet a little elevated; for the many different businesses you are getting engaged in must be tiresome to mind and body. I can not conceive how you can think of having so many enemies, when every faculty of your soul and body seems intent on doing somebody some good. Even the long-neglected prisoner is made happy by your visits and instructions. The printer you spoke of as now being in your employ, we 'are greatly interested in. Go on, dear brother, in your good work; and, if you faint not, in the great judgment-day Christ will make mention of your labors of love to that unfortunate class. I told my husband this morning that I would like so much to see your operations, and I should go to Medina with something like the same feelings that the queen of Sheba visited Solomon.

Our bee business has occupied the time and mind of Mr. Mattison quite a good deal; indeed, I might say almost entirely. We began with 14 swarms, and increased to 23, all artificially. When bees seemed too many for a hive, he would take frames from several hives, and smoke them to make them smell alike; then give them some Italian larvæ in the right state to make a queen of, and they would generally soon be found to have "set up housekeeping" nicely. The queen we got of you a short time ago was, he thinks, gratefully received by the motherless bees, though it has been too cold to make a thorough examination. I see some of the women in the country are turning their heads in a "bee-line." Indeed, now-a-days they claim great liberty, and must have their say too. Some of the communications from them read quite sensible. My husband is trying to instruct me, so if I survive him I shall be able to carry on the business. I think favorably of your intention of making a little book of your lay-sermons, as they may truthfully be called. It is encouraging to think that if any one is in straits, and needs help of God, they can send their requests, not only to the Fulton-street prayer-meeting. but to Medina, Ohio. Go on, dear brother, in carrying the needs of a dying world to God; and remember all your patrons in their various necessities. Remember me particularly to your dear wife, whom I feel aids you in your arduous and trying labors.

EMELINE MATTISON.

Ocean View, Cape May Co., N. J., Dec. 6, 1880.

[Why, my dear kind friend, I never had such a thing as a dressing-gown and slippers in all my life, and I hardly think I ever shall. The clerks all had a good hearty laugh at the idea; and when I read it at the dinner-table, we had another. My wife says I do not even sit still on Sunday, unless I am obliged to while in church; and then my restless disposition revenges itself by making me go to sleep, if they keep me very long without letting me "do something." We should be most glad to see you among us; but I fear you might be sadly disappointed, and you know that wasn't the case with the queen of Sheba.]

KIND WORDS TO OUR CUSTOMERS.

I FOUND the following sentences on a postal written by one of the clerks to one of you:—

.We beg pardon if we have been "short" or "crusty." It was not intended. The "1-90" to which you refer, means that your account stands on Ledger 1, page 90. Our short sentences mean *haste* —not churlishness.

Now, inasmuch as quite a number have taken offense at our brief way of answering, I thought it best to remind you to try to have charity, even if we are short in our replies. Very often, at this time of the year, a great number of letters are waiting for answers, and we felt that brief ones were better than none at all. It is quite likely that the clerks are sometimes a little impatient in a way they should not be, for I have a great many times made them write their cards over again, just because of this very thing. Please try to bear with us when we get cross; and when you get cross, we will bear with you. Shall we not call this a bargain, while we all try hard to do better?

PLEASE, my friends, do not take the trouble to send certificates from your postmaster, justice of the peace, or anybody else. Just make a plain, frank statement of the case; if any thing is wrong, and if I think you have not told it fairly, I will be equally frank. The more I become acquainted with my fellow-men each year, the more I am convinced that by far the greater part of them are trying to be just and honest. We lack wisdom and judgment, many times; but the cases are very few where we deliberately try to rob our fellows. If I am thinking too well of you, may God help you to come up, instead of my faith going down. "What shall it profit a man, if he gain the whole world and lose his own soul?"

ONE more word about answering letters promptly: As usual, about the close of the year we have quite a little ' tussle," if we may so term it, with some of the friends, to get them to answer postals, and have all little matters closed up. Well, after writing to some of you four or five times, during nearly as many months, we finally get quite a letter, and sometimes a small "blowing up," if I may be excused again, because they did not owe the little balance, or else thought they didn't, which amounts to the same thing, or else that some of the goods were lost or broken, or we were at fault in sending them wrongly. Now, my friends, I do not mean, by these statements, that you are necessarily owing me any thing, for very often the fault is all mine and not yours at all; but are you not at least in fault in waiting several months without saying a word? Very likely I deserved the blowing up; but why not give it to me at once, and have it done with? If any thing is wrong, why not say so, right off, and have it done with? The poorest way in the world to settle accounts, that I know of, is to keep putting off, day after day, and month after month. If you have not got the money, and are "hard up," say so, in a manly way; if you have paid the account already, or even think you have, by all means say so; and if the blunder is ours, I will pay you for time and postage, and for going to the postoffice too. Our book-keeper receives the highest wages of any one in the establishment, except Mr. Gray, and all these delays cost me severely; in view of this, will you not try harder to just scratch a line or two on a card, and drop it into the office? In trying to settle up every thing before another season, we have written repeatedly to some of your postmasters, and when that didn't do, I have gone to the expense of hiring a man to hunt you up, and ask you the simple question as to whether you honestly owed that little bill. Now, my friends, for your own good, and that you may prosper and build up a thriving business, and be an ornament to your neighborhood, please do attend to these little matters. Do not have these little sins lying on your conscience; but, rather, be "diligent in business, fervent in spirit, *serving the Lord.*" Is it not the better way? Do you not feel from the bottom of your heart, brother, that I am right?

MASSACHUSETTS AGRICULTURAL COLLEGE.

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES AND HONEY, AND HOME INTERESTS.

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NOTES FROM THE BANNER APIARY.

No. 14.

$25 PROFIT, PER COLONY, AND HOW IT WAS DONE.

As the figures that I gave one year ago, representing the profits of my apiary, *were not shrunk by the cold weather*, I will venture once more to send in my report without waiting until next June.

You will see from the above heading that my profits this season have reached a good round figure; but perhaps you would be more interested in learning how such results were obtained.

I commenced the season with 15 colonies. The warm weather came earlier than usual; I began starting queen-cells the fore part of May; in the middle of the month I commenced forming nuclei, while the first of June found me shipping queens, with 25 good, strong, three-frame nuclei started. There is no use trying to rear queens either late or early in the season, unless your nuclei are kept strong. I will say, right here, that there was almost a steady yield of honey from early in the spring until the frosts came, although there was no great yield at any one time. By July 1st, my 25 nuclei had increased to 50, and by July 15th I had formed 30 more; as this number enabled me to keep up with orders, I did not start any more. I have once or twice before given my method of queen-rearing, and I will not repeat it here; but I would like to say just a word or two in regard to the importance of always having nuclei furnished with unsealed brood, and of always having on hand a good supply of queen-cells. I know it is quite a "chore" to go around every three or four days and see that every nuclei is furnished with brood; but it is just such little "chores" as this that help to bring in $25 profit, per colony. I did this work so thoroughly that not one fertile worker put in an appearance. Whenever there was a scarcity of orders, and I had a lot of laying queens on hand, it used to be one of my "besetting sins" to neglect starting queen-cells; but this state of affairs never failed to be followed by a "rush" of orders that would take every laying queen from the yard, leave me with no cells to put in their places, and teach me the folly of such neglect. During the past season I kept such a large stock of cells constantly on hand that I frequently had to kill young queens when they hatched, there being no place to put them. I do so dislike to kill a queen, that these newly hatched queens were frequently introduced to nuclei at the same time that the laying queens were removed; perhaps three-fourths of these queens would be accepted, and the time thus gained more than counterbalanced the queen lost.

My increase was only four colonies; my surplus honey was 40 lbs. to the swarm, and the number of queens sold, per colony, was 25.

I have kept bees four years, and the average profit, per colony, has been $18.82. Friend Doolittle, what has been your average profit, per colony, since you first engaged in bee culture?

W. Z. Hutchinson.

Rogersville, Genesee Co., Mich.

CALIFORNIA LETTER.

We have had a 3-inch rain, and bees are in fine condition. We are still eating grapes from the vines in our apiary. Over 400 white hives, six feet apart, in hexagonal shape, on clean, light-colored ground, when the glare of the sun is on them, I am inclined to think is rather hard on the eyes, especially when one has to look through glasses and a bee-hat; but the grapevines, when in leaf, relieve the difficulty somewhat. It is true, they take up some room, and are sometimes in the way; but we rather like this obtrusiveness, just as we do with wife and children; we rather like to have them rub against us, even if we do have to shove them to one side rather rudely for business considerations.

BEES AND GRAPES.

I hear considerable said of late about the injury of grapes and other fruit by bees. The yellow jackets, or yellow hornets, are exceedingly numerous here this season, making the trouble by bees very considerable, especially where the sweet varieties of grapes are being dried into raisins. They take them almost wholesale where they can get at them. In Los Angeles county, where grapes are raised in great abundance, there will be a special effort to have a State law passed to prevent bees being kept in the vicinity of vineyards. But I suppose the general law of the State is at present sufficient to protect their property. However, your late statement of one being liable to a penalty for killing another man's bees the same as any other kind of stock, I think is not fully correct. The law of Ohio supposes that all domestic animals, commonly understood not to be dangerous or injurious in running at large, does not make the owner liable for damage for accidental injury from such animal; but if the owner knows that any animal owned by him is inclined to mischief, he becomes liable for the damage; or if he keeps a bear, or any animal generally supposed to be dangerous, the owner becomes liable for all damages by such animal's running at large; also any kind of animals or stock that in its very nature is not within the control of the owner, the owner is liable for damages by such animals; but, besides this, *if the owner can not control his own stock* (as bees), *it gives extra liberties to the one injured to protect himself against it;* so that, so far as law is concerned, I would feel comparatively safe in killing a man's bees or pigeons if they injured me, rather than his horses or sheep.

HONEY-KNIVES.

I used the Bingham & Hetherington knife the past season, and, although some of our neighbors call it a "trowel," I lay aside all other kinds, and use nothing but the *trowel.* It throws off all the cappings so nicely. R. WILKIN.

San Buena Ventura, Cal., Dec. 11, 1880.

POISONING BEES, AND BEES AND GRAPES.

FURTHER FACTS IN REGARD TO THE CASE GIVEN ON PAGE 530, OCTOBER NO., VOL. VIII.

MUCH interest has been expressed, and many questions have been asked, in regard to this sad affair, and I have waited thus far, hoping that some amicable settlement of the trouble between the two neighbors might be brought about. As I have given but one side in the article referred to, I will now give both sides of the matter.

Mr. Root:—I have been to see Mr. Krock, and I will give you the substance of what he had to say. "Mr. Rosekelly, I told Klasen two years ago that his bees were damaging my grape crop, and that he must do something with them; but I have never been bothered as much as I have this fall. My girls had to wear gloves all the while they were picking, and would then get stung often; and the baskets, after they were filled, would have from fifty to one hundred bees in them, and we could not pack until night. We worked several nights all night. I saw Klasen, and told him that his bees were damaging me, and he told me that I should 'put them in the pound,' as I could easily tell his bees by 'tickling them a little behind.'"

I then asked Krock if Klasen did not offer to pay him damages.

"No, sir; he only offered to buy a mosquito-net to put over my door and windows, and that would have been of no use. I first thought that I would sue him for damages, but could not prove that it was his bees. Then I thought I would go to the town council and prove them (the bees) a nuisance; but that body refused to act upon it, stating that they had no right to do any thing about it. So you see that the law was out of my reach; and when I went to him I was met with blackguarding talk, instead of his meeting me as man should meet man. I have lost a third of my grapes, and if you do not believe me, ask" (he here gave me several names). I showed him my letter and your answer, and explained to him how the poisoned sweets had drawn many bees that would not otherwise have come.

"I know that this has brought trouble upon the bee-keepers, and it would not have been if he had not overstocked the town, and he does not feed them, and so they have to eat people's fruit.

"I must either dig out my grapes, or the bees must be moved; and as for the lawsuit, you have known me from your childhood, and you never knew me to have any thing of the kind, and I would like to drop the case, on condition that he take away his bees."

GEO. ROSEKELLY.

Huron, Ohio, Nov. 17, 1880.

The following is from a mutual friend of the parties: —

Mr. A. I. Root:—At the request of my neighbor, Mr. H. I. Krock, I take the liberty of addressing you on the subject of a difficulty between him, Mr. Krock, and Mr. Peter Klasen, for damage, which he, Mr. Klasen, has sustained in the loss of his bees, wherein he accuses Mr. Krock of poisoning them. Mr. Krock emphatically denies the charge. The two gentlemen are my neighbors, both of whom I hold in high estimation as citizens, and am sorry to see them in a dispute which must eventually be an injury to both, as there are doubtless two sides to the question.

Mr. Krock commenced the cultivation of grapes in this village in 1864. He now has about 4 acres under cultivation, which is his principal revenue for the support of his family. He is 64 years old, with a wife and two daughters depending upon his vineyard principally, for support; so it would not do for him to abandon it. He is willing to abandon all claim for damage heretofore sustained in consequence of the bees if Mr. Klasen will remove them out of reach of his vineyard. It is very evident, that Mr. Klasen can not prevent his bees trespassing upon the grapes when they are located so near the vineyard—less than half a mile. Mr. Krock says that he has heretofore frequently called Mr. Klasen's attention to the subject of the injury his bees were doing to his grapes, but was answered in a sneering and provoking manner. I can scarcely think that Mr. Klasen really intended to be insulting. He probably did not think how irritating his remarks were. I don't think that Mr. Krock would make a false statement. He says that he used Paris green to poison the potato beetle, as they were destroying his potatoes which were growing among his grapes. When the bugs quit, he put the dish containing the poison inside his packing house. When the grapes began to ripen, he cleared out the packing house, and the dish containing the remains of the Paris green was set outside. He admits that the bees may have gotten some of the poison, but if they did it was accidental. I have been in Mr. Krock's vineyard, and I know that the bees were very annoying; so much so that Mr. Krock dare not take his horse into the vineyard. Mr. Krock wishes to avoid litigation, and would be glad to drop all contention, and I think that Mr. Klasen would take the same view, and drop the matter if some of his bee-keeping friends would give him the right kind of advice. I don't think that Mr. Klasen is really a bad man; but when temper is up, reason leaves.

I fear that I may have trespassed too long upon your patience; but if I have, you will please excuse me when you take into consideration that my object is not selfish. I only wish to make peace between my neighbors. Mr. Krock wishes me to inform you that he will be glad to give you any information you may think proper to ask. I think that Mr. Klasen intends to remove his bees from town, as there are others who are annoyed by them. With the hope that you will patiently take my remarks into consideration, I remain yours truly—

Huron, O., Dec. 9, 1880. GEO. S. HASKIN.

In a later letter, Mr. Rosekelly adds the following:—

Mr. Klasen is with me now, and says:—

"My damages are more than I first thought they were. I told him to make out his bill of damages, not only of what my bees had done, but what others had done, and I would pay it; and he said he would not; that he would not be bothered with them; says he, 'You think you will get rich out of bees, but you won't. I will fix them.' Now, as for the damages done his grapes, it is queer that my bees should fly over other peoples' grapes and not damage them, but should do all the damage to *his* grapes. When I found that my bees were dying, I tracked them by their dead bodies to the vineyard of Mr. Krock, and I found the poison on boards (syrup and Paris green mixed, poured upon mashed peaches and grapes; a dish of the same I have in my possession yet.) Mr. Krock, undoubtedly, in his letter, tells that he has offered to settle with me; but I would here like to state the conditions. When I was in his vineyard, I happened to meet Mr. Krock, and he ordered me off, and took a grape-stick in his hand to make me go, and I pointed a revolver at him, to keep him from striking me; and for this he complained of me, and we had our trial before the Probate Court, and there he offered to withdraw his suit against me if I would not sue him for damages, which offer I could not accept, because I would not settle. He subpœnaed all the witnesses he could, in order to make my cost as great as possible, which was $1.00 fine, with the cost of prosecution, of which the lawyer fees were about $20, and other expenses amounted to about $60. I have sued him from the encouragement I have had from the bee-keepers; and as some want to know what proof I can bring, I will here mention, first, he told three men that he would poison them; to me, he said he would 'fix them.' Four other men besides myself saw the poison as prepared on the boards in his vineyard. From the encouragement of the bee-keepers, I employed Mr. King (attorney, of Sandusky) to prosecute the case to the fullest extent of the law, if he does not settle.

"If any one desires to ask any question regarding the case, I will gladly answer by return mail.'

N. B.—Gentlemen, as you are interested in the business, we should like to hear from you through GLEANINGS, or direct. Some have advised us to settle; but what terms shall we make with Mr. Krock? I hope you will all feel interested in this matter, and a few I will call upon to give their views; viz.. A. I. Root, Messrs. Doolittle, Blood, Hayhurst, Fish, Boardman, Mackey, Dadant, and others.

GEO. ROSEKELLY.

Huron, Erie Co., O., Dec. 20, 1880.

My friends, inasmuch as I am called upon first, I presume it is proper that I should speak first. You all know how strongly I have urged upon you, " not by might, nor by power, but by my Spirit, saith the Lord of hosts." The temptation is strong to use might and power here; but let us be slow in judging. Nearly all whose eyes meet these pages will be interested parties, and interested on one particular side. It is evident that both these men are stirred up, and hardly show forth their better selves. Is it not plain that both have done wrong? Perhaps God only knows how much wrong. Mr. Krock is a stranger among us. It is more than likely that we shall feel a prejudice against him which he hardly deserves, because we are all bee-men. May I not plead for a little charity from him? Shall we not let the world know that we can overlook a wrong, be forgiving,—yes, and be magnanimous? Our good friend Klasen (I know him, for, in fact, I gave a little picture of him on pages 293 and 294, June number for last year) has lost $160.00 already, but he brought all this trouble on himself by pointing that pistol at his neighbor. What in the world made him so foolish as to have a pistol? Do you remember the talk I gave you in regard to them awhile ago? To come to the point: my advice is, to let it drop right where it is. Let God judge friend Krock if he has not told it all just as it should be. My advice is safe; you all know it is. If friend Klasen's neighbors want him to move his bees away, by all means let him move them. Who would wish to even seem to be a nuisance to the neighborhood?

For our dear Savior's sake, friends and neighbors, let us do nothing that will make these two men get further estranged from each other. Let us subscribe money, if need be, to get them to drop it, far rather than to enable them to go on with it. Help us, O Lord, in our weakness, as thou hast helped us in times gone by.

REPORTS FROM THE BEE-MEN OF MEDINA COUNTY.

ACCORDING to your request for the bee-keepers of Medina Co. to send in their reports for the past season, I reply as follows:—

We had, at the opening of the honey season, 130 swarms, all in good condition, yielding us 3000 lbs. of comb and 1500 lbs. of extracted honey. The comb honey was sold at an average of about 15c per lb.; the extracted honey is worth 10c at wholesale.

We increased our number of swarms to 185, giving us 55 new swarms. We allowed our bees to swarm naturally, and also to build their combs without any artificial assistance; and by proper management we secured nearly all perfect worker combs.

A summary of the proceeds for the season gives $600 for the honey product; and, estimating the new swarms at $5.00 each, they would be worth $275, making the gross proceeds $875, giving an average of nearly $7.00 for each swarm.

The flow of honey from fruit-blossoms was the best we ever had. White clover yielded honey moderately, but did not continue nearly as long as usual. Basswood blossomed unusually full, and the prospects for a large yield were exceedingly good. But we were doomed to disappointment; for, after the bees had fairly got to work, the weather became very unfavorable on account of the almost incessant rain, which continued until the basswood season closed,—thus terminating what might be called a moderate honey season. W. H. SHANE.

Medina, Ohio, Dec. 17, 1880.

We started last spring with 60 swarms of bees, and about half of these were in old L. hives. These came through very weak. We put them all together, but they would not have made 10 good swarms. We now have 85 good strong swarms, and took about 1000 lbs. of honey. We fed back about 400 lbs. of this, leaving 600 lbs. This has been the poorest honey season we ever knew, or, at least, one of the poorest. We sold no queens this season. We have used our hive three winters, and have never lost a single swarm yet in them. Get away Langstroth frames for us.

F. R. Shaw.

Chatham Center, O., Nov. 25, 1880.

I have tried to get reports from the rest of our Medina friends, but some way they don't seem to get around to it.

SEPARATORS OF PERFORATED METAL.

ALSO ABOUT PERFORATING THE SEPARATORS WE ALREADY HAVE IN USE.

SINCE our last, I have had considerable correspondence in the matter, and find that the perforators of sheet metals will furnish us tin or zinc separators, perforated in any way we may choose, either round or oblong holes, and of any size, so that separators in lots of 10,000 can be furnished at an even 5c each. I am sure you all agree with me, that this is too much. Well, here is something to the point:—

I inclose sample of perforated tin from J. C. Carpenter, of Cherry Valley, N. Y., and his letter concerning his machine. My opinion is, that he has "struck ile." I have suggested that he make the perforations closer, and alternating each other. Also that he send a machine to you or Nellis, that you may pass upon its merits for simplicity and durability.

J. S. Hughes.

Mt. Zion, Ill., Dec. 14, 1880.

I notice in Gleanings, page 536, Nov. No., an article from you expressing a want among bee-keepers of open or perforated separators for honey-boxes. I think that open separators are desirable, provided they do not cost too much. I have just completed a machine for perforating tin or paper, with which I can do the work quite rapidly. I can perforate the separators for an ordinary hive for 20 cents, or perhaps less; or I could furnish separators to order for the above percentage. I inclose and send you a specimen of my work. You will naturally inquire what the machine costs. They may probably be afforded for $5.00, after getting used to making them; still, I am not quite prepared to say what will be the cost. I should like to hear from you upon the subject.

J. C. Carpenter.

Cherry Creek, Chautauqua Co., N. Y., Dec. 10, 1880.

Here is something further from friend C. himself:—

I send you by this mail a specimen of my perforated tin separator. I can perforate tin or paper very rapidly and cheaply. If there is any, or but a small gain in honey with open separators, it will soon pay all expense and afford a profit. I have a hand machine that does the work.

J. C. Carpenter.

The holes in the samples of tin sent are ⅜ inch in diameter, and ⅜ inch apart. It seems to me the best size of these holes, and the proper distance, can be determined only by experiment. Can not friend Doolittle help us in the matter? It is my impression, that bees will sometimes bulge a comb of honey into a hole ½ inch across. Who can answer? Our blacksmith is now at work making a tool, something like our tinner's snips, but rather heavier. It is to have movable dies, so as to cut any size holes, and a gauge is to be attached for spacing the holes at exact distances, quickly and rapidly. I presume about $5.00 will be as low as it can be made. Now, it may be that the right kind of wire cloth will be cheaper and better than any perforated metal, so it will be well to move slowly in such matters. Friend Abbott, of the *British Bee Journal*, gives, in his price list, an engraving of the zinc excluder friend Jones has mentioned, and I have samples of zinc with oblong holes that I should think just right to exclude queens and drones, that can be furnished in small lots, sheets any size, for 40c per square foot.

BEES LEAVING THEIR HIVES DURING COLD WEATHER.

I HAVE selected the following letter, received just as we go to press, from among several of like tenor. It seems we are going to have trouble this winter, in many localities.

I fear I shall lose all my bees. They are dying off very fast every day; even during this cold weather they fly out and fall in front of the hive, and perish by the hundreds. Some of my neighbors have already lost all they had. Mine are well packed on summer stands, with quilts and carpets, straw and boards. I attribute it to bad honey, as they are strong in numbers and stores. I have to-day given them candy, in hopes that they would eat it instead of their honey. I have just seen a neighbor, who has his bees in the cellar, and they are acting in the same way. Some whole colonies have died, leaving plenty of honey. Am I right as to the cause of this destruction of our pets? if so, how can we save what remain? I might add, that all the bee-men whom I have heard from in this vicinity make the same report.

M. H. Wolfer.

Richmond, Ind., Dec. 26, 1880.

I should say, candy is your only hope, friend W. If the weather comes off warm soon, I would take away their stores and give them other combs and a pure candy diet; that is, where the bees are coming out in such numbers as to make it certain they would surely die if left to go on in this way. If only a few come out thus, say a dozen bees in a day, I would not disturb them; but where you see the colony is surely going, I would use only granulated sugar for the candy, without any flour or any thing else. Lumps of white rock candy are almost chemically pure cane sugar, and, although it costs a little more, it is perhaps the most wholesome food for bees that can be found, when given to them in small lumps at a time. If you can not find it at your grocer's, we can furnish it for 15c per lb.

CORN AS A HONEY-PLANT, ETC.

EASTERDAY'S REPORT.

I COMMENCED the season with 12 colonies, and increased to 23. Took off 1089 lbs., all comb honey—an average of over 90 lbs. I bought 5 old colonies in August for $12.00, from which I took 180 lbs. Nearly all of this honey was produced during very dry, hot weather in August and September; principally from corn-tassel and smartweed. I am aware that many contend that corn does not yield honey; but I have always got more from that source than from white clover. My honey sold readily at an average of about seventeen cents, net.

Nokomis, Ills., Dec., 1880. E. S. EASTERDAY.

There now! I always thought corn was good for bees; or, perhaps, I should say, rather, I *hoped* it was. Last season I bought a bushel each of three kinds of sweet corn, and planted patches of them on our grounds. The bees worked on all, and got large quantities of pollen, if they did not honey. Well, to kind of make my honey farm pay a little something, I sold green corn and some other garden stuff. Neighbor H. is a farmer, you know. Well, he and Mr. Gray were one day laughing at my market-garden speculation. I had a man hired at $1.25 a day, and I had hoped to sell enough stuff to pay his wages. Said H., "Mr. R., you are a tip-top hand to run a bee journal and factory; but when you get to farming, you are off from your beat. You may possibly make your ground yield the 25c part of the $1.25, but, if I mistake not, you will be just about a dollar a day out of pocket."

Well, it was a good deal so, my friends, on a great part of my crops, because I had so little ground, and could not be with the boys personally much of the time. But there was one thing that paid expenses, and a little more. It was the green corn. It was very little cash out for labor, and the corn sold readily at 10c per dozen ears, the whole of it. More than that, a lot of it was dried, and it is certainly the most delicious corn now of any we have ever used or tasted. Caddy and Blue Eyes both testify to its excellencies. The corn was the Mammoth Evergreen; and next year I am going to have a field large enough to keep our lunch-room supplied, not only during the summer, but with dried corn through the winter months. Who knows but that we may be able to put a package of superior dried corn on the 5c counter, large enough to make a good meal for the whole family? Wake up, boys! Who among you, ye sons of toil, will furnish me with dried corn by the ton, so I can sell it low, and do good, and all get paid for it too? The honey will be clear profit, you know. The corn mentioned was so sweet that we all accused mamma of putting sugar in it. You see, when you get a lot of it ready for market, you can just send samples by mail. Why has dried corn never yet been before the public? Good canned corn can be had, it is true; but think of the expense of cans, and the extra bulk of corn boiled in water, juice and all, compared with dried corn. Our dried corn is, besides, vastly superior to any canned corn we can get in our market. Who will furnish me a ton? Where are our feminine friends who have nothing to do? and who will tell us the best method of drying it? If this article is not all about corn as a honey-plant, it is a good one, I am sure. If you do not think so, come down to dinner with us, and have a dish of that dried corn. I presume it was that new book of the Home Papers that started my mind off in this direction.

Bee Botany,

OR HONEY PLANTS TO BE NAMED.

I SEND you by mail to-day a honey-plant which is of considerable value in this locality. No. 1 grows in wet places, and is rare here. I have ¼ acre of it. It is in bloom from middle of May till middle of September. Bees work on it all day. It grows 6 ft. high; has a branching top, with numerous bunches of bloom, similar to the elderberry in appearance. I send you one branch of stalk, with seed inclosed inside. J. W. VANDORN.

El Dorado, Kan., Oct. 6, 1880.

The piece of stem is that of a large plant belonging to the Parsley family (*umbelliferæ*). Flies work on these plants a good deal. It is most likely some species of Archangelica in the order above named.

Lansing, Mich. W. J. BEAL.

The stalk referred to looks like a joint out of a dock-stem, only it is of mammoth size, and so hard it seems as if it might do nicely for some kind of timber tubing. It must be a curiosity indeed to see such a thing growing; and if it bears honey in proportion, it must be worth while indeed. Will you please send a few more seed, friend V.? We sent all those with the stalk, to Prof. Beal.

COTTON AS A HONEY-PLANT.

I come to vindicate my staple honey-plant,—cotton. I see friend Cathey, of Cabot, Ark., classes it as a poor honey-plant. His description of the bloom is correct. My bees seldom enter the bloom, as there is but little honey secreted on the inside of the corolla. They get their honey between the corolla and the five-pointed calyx which hugs the corolla very tightly, admitting only the tongue of the bee; and as the honey is secreted at or near the base of the corolla, where the little boll increased, and as the calyx is six-sixteenths of an inch in depth, and the tongue of the Italian bee is only four or five sixteenths of an inch in length, it is impossible for the bees to get all the nectar, and frequently the calyx is so tight around the corolla that it is impossible for the bees to get at the nectar. My bees gave me a surplus of 30 lbs. per hive in July, and during August and September they stored from 50 to 60 lbs. per hive from cotton alone. I had fifty acres of cotton on my own farm, extending to within fifteen feet of my hives. I spent many hours in the cotton-fields, to satisfy myself that my bees were getting their honey from the cotton; and as I live on a high, open prairie, three miles from timber, and nine-tenths of the land is under cultivation, and fully three-fifths planted to cotton, with no other flowers from which my bees could get honey, I know that is the best honey-plant we have; and if it were not for the countless millions of small black ants that appropriate a greater part of the nectar, our bees would gather tons of honey every year from the cotton alone. I do not write this to get up a controversy with any of my Southern bee-keepers, but to set them to watching closely for the honey, for the bees, and how they get the honey, and for the greedy little ants that get most of the cotton honey. The honey from cotton is white and very transparent, and after standing a few months is equal to the famous white-clover honey of the North.

B. F. CARROLL.

Dresden, Navarro Co., Texas, Oct. 30, 1880.

MALLOWS AS A HONEY-PLANT.

Inclosed find some seed and some of the stalk which blooms from July till the ground freezes. My bees are working on it to-day, and have been ever since basswood. J. K. OREN.

LaPorte City, Ia., Oct. 6, 1880.

The plant sent is *Malva alcea*, a kind of mallow which has escaped from cultivation. W. J. BEAL.

Lansing, Mich.

The same plant was in bloom in our garden last season, and the bees were busy working on it November 5th. I can not now remember who sent it to us, but it has excited considerable attention this season. The blossoms are exactly like little hollyhocks. I have no doubt but that a half-acre of it would be a sight. It grows nearly as high as the hollyhock, but has a much more branching habit.

Below is a report from the same plant, from still another locality: —

I send you to-day a parcel containing leaves, flowers, and seeds, of a plant we call "Malice." It blossoms from early spring until late in the fall. If it is of any account for bee-food, will you please give notice of it in GLEANINGS as soon as possible, and oblige a subscriber and lover of flowers and bees?

Richmond, Mich., Nov. 6, '80.

A LETTER FROM SCOTLAND.

FROM AN ENTHUSIASTIC A B C SCHOLAR ACROSS THE WATER.

I MAKE bold to write you, as you are a friend to every one interested in bees. Your book fell into my hands in the spring of this year. I happened to find it in a friend's house, and as he was making no use of it I begged a reading of him. The result was, that your name became a household word in our circle. Your plans of bee-keeping were at once adopted by me, and, though laughed at by many an old-fashioned apiarist, I persevered with my pound section-boxes till, in the first week of July, I experienced the delight of lifting off from one of my hives one completely filled. It weighed exactly 16½ ounces. My dear wife, who, since that, has, by our all-wise heavenly Father, been taken from me, was very much pleased, and so were all our friends. The enemies of the system were all amazed. Encouraged by my success, I still went on supering my hives with these little boxes; devised tin separators, which, while they made the bees work straight combs, freely admitted the laden workers to the honey-chambers; then in the beginning of August, just as the heather was bursting into bloom (a moor containing four thousand acres is within three miles of our village), on a dull night I had my hives carted off and set down on a meadow, with heather in front of them,—heather, purple-blooming heather, as far as the eye could reach. How the bees worked! Making a noise like a stream of water, they poured in and out as only bees in earnest can do. In the first week of September, at our annual flower show, I exhibited a crate glassed at both ends, containing 36 lbs. (in 1-lb. boxes), each box so beautifully and smoothly filled, capped with a snowy wax capping, that not a drop of honey was escaping; not a bit of comb protruding. The first prize was obtained for the exhibit. Next day, the same crate took first prize against all comers—against men who have been bee-masters for forty years, at the show in Sterling. I did feel some pleasure in being at once looked upon as an authority in bee culture; but I told those whom I thought worthy of enlightenment, that they must procure a copy of the book which had been of so much value and service to me. All thanks to you, dear friend. You will, however, allow me to say, that a man's love for these busy creatures, and his ingenuity, will do much to win success, even in bad years, and that these are required over and above the aid of a valuable book, such as you have given the world.

I always like to think of my bees being the creation of Him who said to the disciples, "Gather up the fragments that remain, that nothing be lost."

They truly are the gatherers of nectar that would be lost had he not sent them—skilled laborers—into the harvest-field to prevent waste or loss.

You may be sure that my "little fellows" are all comfortably housed; strong in numbers, and plentiful in stores. JOHN MAIN.

Violet Bank, Doune, Perthshire, Scotland.
Nov. 27, 1880.

BEE POISONING.

EDITOR GLEANINGS:—I wish to relate my case of singular poisoning of the bronchial tubes, which I receive whenever I am about an open hive, or in a room where several bees are confined, or where an angry bee passes within a few inches of my face. You are all aware, that often an angry bee throws off poison which you can smell readily. Were you also aware, that nearly every bee that flies about you (not loaded or *en route* for the fields) also throw off a lesser quantity of poison? Well, such I have proven to be the case. The same is true when hives are opened, at nearly all times.

This shows us how careful we should be about irritating the bees when removing surplus honey, in order that the honey may not become impregnated with the poison. This trouble commenced about six or seven years ago, and the first symptoms were an itching in the glands between the ears and roots of the tongue; next, a tingling, itching sensation in the back part of the roof of my mouth, very hard to bear. Then this sensation crept down the bronchial tubes to the lower portion of the lungs, till I found I had bronchial asthma. I had to get out of bed and go to the window to catch my breath, at night.

I had every evidence that the poison from the bees caused all the above symptoms, but still I would doubt it at times. Whenever I was away from the bees for two weeks at a time, I would get all well again. Finally I decided to settle the matter. I kept away from the hives till I was entirely free from any of the symptoms. When I opened a hive, and when the bees were quite enraged, I drew a long breath upon them, and I tell you, I shall never try that experiment again. I was in terrible distress for a half-hour. I coughed with a "tight" cough for about two days; then I began to "raise," and this kept on about three weeks before I healed the wounds. During all the rest of the fall just past I kept away from my apiaries, except to go in occasionally to direct the work, and then with a handkerchief tied over my nose and mouth. Now I am as well as any of us, but much disappointed when I think that next season I must shun my favorite labor. When you consider that bee culture has been a specialty with me all my married life (12 years), and that nearly all my capital is in it, and that just now the honey-producer's future seems to brighten, you can readily imagine that an antidote for this trouble would be very acceptable. I have tried many and various remedies, among which the best is ammonia, gargled and swallowed; but none of them are equal to the task, and soon become negative to the poison.

I have business enough now, with my supply trade, to keep me at work out of the apiary; but my greatest trouble is to get good reliable help who understand the business. I used to take good men, and teach them the trade; but now, as I can no longer work among the bees, educated help becomes a necessity, and, I fear, a very scarce one too. With the present low rate of interest for money, and outlook in our pursuit, I should be enlarging rather than contracting, but for the above-described trouble. Has any one ever experienced or observed any thing like it? Any information would be thankfully received. JAMES HEDDON.

Dowagiac, Mich., Dec. 9, 1880.

I have noticed something of what friend H. mentions, in regard to the poison from bee-stings, although it never affected myself, nor any one whom I have conversed with, in the manner he states. I am inclined to think that handling bees was not the original cause of the disease he mentions, but that the virus from the stings only aggravated a complaint that proceeded from other causes. Of course, I may be mistaken in this. In any event, I do not think we should be in haste to conclude that working among bees is necessarily an unhealthy pursuit, even though friend H. be correct in all his premises. Prof. Cook has recently written in regard to a kindred matter, showing that what is " one man's meat may be another's poison." You will find, in this No., very strong proof that these same stings are of great advantage in some cases of rheumatism; well, may it not be that the same virus that proves poisonous to friend H. will be exactly the medicine needed for some other brother or sister who is afflicted?

REPORT ON HONEY-PLANTS.

As I have previously promised, I will now make a full report on my success with honey-plants during the past season. I tried four kinds; *viz.*, touch-me-not, or the common garden flower called balsam and lady slippers; mignonnette, Simpson and Spider plants.

TOUCH-ME-NOT.

Of the first-named, I have tried some for two seasons. This season I had a patch, say 30 by 60 feet. They bloom freely through the last of July, August, and Sept., and, having a great variety of shades and colors, they make a very attractive appearance to any one who does admire nature's beauties. I have watched them quite closely, as a honey-plant, and I have come to the conclusion that they do not produce the nectar in very paying quantities, while they do serve to keep the bees out of mischief, such as robbing and pilfering, at such times as there is not much else they can find to work on.

MIGNONNETTE.

I became pretty thoroughly disgusted with mignonnette last season. I planted a piece, say 150 feet square, of the very finest of ground, rich and mellow; but I had to plant it over three times, and then did not get half a crop from it. I have planted it two seasons, and I have found the seeds of it the very hardest to germinate of anything I have ever tried. I can beat it with the Simpson seed a thousand to one, as a honey-plant. I conclude, it is fair, but not the best. Sometimes the bees seemed to work on it quite fairly, and at others scarcely at all. If it could be easily grown, I would be satisfied to raise it every year; but my patch last season cost me, in ground rent, seed, and cultivation, at least $40.00, and I do not think I got $5.00 benefit from it. But I was consoled in the fall by the information that the kind I had cultivated, which was the small sweet, was worthless as a honey-plant, but that the mammoth, or grandiflora, were the only ones worth the culture for producing honey. If this be true, what have all our bee journals been doing by advertising and selling the seeds of the worthless kinds? Do they not merit a place in *Humbugs and Swindles?* Next season I intend to try the larger kinds.

THE SIMPSON PLANTS.

Of the Simpson, I conclude the half has never yet been told. I cultivated a small patch of about a thousand plants. I saw the first bees on them the first day of July, and they were fairly at work by the 8th or 10th; and from that on, for fully two months, it was one continual big boom, from early dawn until fully dark, wet or dry, hot or cold; yes, even in the rain they would not give it up, for I went out one morning after it had been raining hard, and was then raining quite briskly, and the bees were flying there in quite goodly numbers. Two mornings I got up at four o'clock to get ahead of the bees, to see how early they would get to work; but both times they were there first. One night I remained to see how late they would stay, and I could hear them as long as I could see them; but it was not only a few bees that would be seen, but a large multitude of them. To look into the patch, it would seem as if a swarm was settling there. As the patch was not over ten feet from my shop, my opportunity for observation was good. It was a common thing, when my friends came to see me, to take them out and show them the sight; and, without exception, they said it was the greatest wonder in that line they had ever seen. About the 10th of Sept., it began to seed, and by the last of the month, scarcely a bee was seen about it, and I pronounced it done for the season. A couple of weeks later, I went to it to strip the seed, and was not a little surprised to see new green shoots, new buds, and new blossoms, and the bees working on it again quite lively. A fresh rain had renewed it; but as I wanted the seed, I stripped it. I also raised several hundred plants from seed in the spring that bloomed finely in the fall.

As this is already too long, I will report on Spider plants next month. **A. A. Fradenburg.**

Port Washington, Tusc. Co., O., Dec. 13, 1880.

Are you not a little hasty, friend F., in accusing the bee journals? I have tested the large kinds of mignonnette on a considerable scale, and, if I am not mistaken, have reported in regard to the matter in these columns. My experience has been about like that you give, if I except some small patches that were sown on a very deep fine soil. It has never come anywhere near the Simpson plants, in our locality.

HOME DECORATIONS.

One of the clerks came into the office a few days ago, wearing an apron, the print of which was beautiful specimens of ferns and forest leaves. In answer to my question as to how it is possible for calico-printers to give us patterns so beautiful and true to nature, I was told that it was only home-made calico, prepared from a piece of white cloth. By request, she has furnished the following description of the work. I presume our friends will study up a great variety of ways in which this new art may be applied. Some of the blank books we use in our work have beautifully embellished covers of leaf work done in the same way. Here is the description:—

SPATTER WORK.

To make these beautiful spatter-work pictures, which every one admires, provide yourself with a "spatter-frame," a tooth-brush, a saucer, some ink, either common (not Oldroyd's, as it runs too freely) or India ink, and some foolscap or sized drawing-paper. Have ready some prettily shaped pressed leaves, such as ferns, honey-locust, delicate vines, or any wild trailing plants. Spread a newspaper over a bare table, to protect it from ink-spatters; lay your blank paper in the center of it, and arrange your pressed leaves in any form you please. Fasten the leaves down with pins or needles stuck through into the table. Pour a little ink into the saucer, and dip the tooth-brush into it; shaking off all the ink you can into the saucer. Now hold the spatter frame over the paper and rub the brush lightly across it, allowing the ink to sift through and fall like spray on the paper below. Move the frame slowly about, stopping occasionally to allow the ink to dry, or the particles will run together and make large dots. If the tint is not uniform, go over the lighter places still more until a smooth tint is secured. When the tint is several shades lighter than it is intended to have it when finished, take off some of the top leaves, which are required to be darkest in the design, and then proceed with the spattering again. When it is several shades darker, remove more leaves, and repeat the spattering, and so on, till only those leaves remain which are to appear white in the design. Fine stems and tendrils may be produced by careful scratching with a sharp-pointed knife. Dark stems and veins in the leaves can be produced with a fine pen or brush, using strong color. Also, in the same way, decided shades and effects are made by the use of fine dots or fine parallel lines drawn regularly, and of even thickness; but this is not necessary to the production of very beautiful results. A little practice will make you quite an expert in picture-making, and you can decorate your walls as much as you please. Beautiful tidies and pillow-shams can be made by spattering on book muslin or common bleached muslin instead of paper.

The spatter frame or sieve is an oblong piece of fine wire cloth 5x3 bound with tin, and with a tin handle attached to one end.

What has all this got to do with bee-culture? some may ask. Well, I do not know, really, unless we ornament our cases for section honey by this plan, or, possibly, some one may choose to make a hive and ornament it with maple leaves, ferns, etc.

WILLOW.

A few years ago I cut off a limb of what I thought was the most beautiful willow-tree I ever saw. It was standing at the head of a grove, and I found it had been the stalk of the kill-monark willow that had been broken off. [See page 599, Dec. No.] I planted it near my well. The second summer, the abundance, beauty, and fragrance of its bloom were the admiration of all who saw it. The first season, the weather was such that the bees could not work on it. The next spring it was thronged with bees throughout the day; and, to my astonishment as well as delight, they gathered not only the pollen, but they also cut to pieces and packed in their little baskets the entire anther, and carried it to the hive. The flower, when well developed, is about 1½ inches long, and ¾ of an inch in diameter. I have counted over 50 well developed flowers on 36 inches of a single cane. The flower is of a rich golden color, and consists of a center, out of which spring up hundreds of thread-like filaments that support the anthers, or, it may be, the flowers proper. These are nearly 1-16 of an inch in diameter, and from 6 to 10 anthers are enough to load a bee to its utmost capacity. I can't give the name of the willow. It blooms very early and continues in bloom from a week to ten days.

The tree seldom sends up a sucker, and never, to my knowledge, any distance from the tree. To obtain suitable canes for nice trees, or to bud the kill-monark, the tree needs to be grown in a moist place, and to be cut back every spring. To insure the growth of such canes, they need to be cut before blooming. I keep about 50 colonies of bees, and have had such a desire to have them reap the rich stores, that I have done my cutting after blooming; hence my increase has been slow. I have no trees for sale; but to satisfy all as far as I can of the truth of my statements, I will send a tree to friend Root for his grounds free of charge, from a cutting a year ago last spring. I will send a cane also, such as I plant, and a cane showing about what I have found to be the maximum flowering capacity. I can furnish about 1000 cuttings. For terms, see advertising columns. **Henry Culp.**

Hilliards, Franklin Co., Ohio.

Lest some of the friends accuse me of partiality in permitting references to the advertising columns like the above, I will explain, that new and meritorious articles offered at a low price, which I think will be of public benefit, I often advertise entirely free. We are very much obliged to friend C. for his valuable communication, and I know by experience that he would necessarily be besieged by applications for cuttings from the willow, entailing, perhaps, an expensive correspondence, did he not anticipate it by offering them for sale as he has done. At the very low price he offers them, no one can well accuse him of wishing to make money by it. I shall be very glad indeed to get one of the trees.

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FRIEND KLEINOW'S SWARMING TROUBLES,

AND SOME OTHER TROUBLES NOT CAUSED BY SWARMING.

I TAKE the liberty to send you my report for 1880. In the spring I had about 50 strong colonies and a few weak ones (mostly Italians), and a few hybrid colonies; 24 colonies in your chaff, 16 in your Simplicity, and 10 in your 1½ story hives; also 2 in the "Patented Palace," 1 in King's "Patented Improved Double Wall American," and 2 in box hives of my own make. So you see, I had a variety of hives. But the best report of comb honey I can make is from one of your chaff hives. It is 60 of your 1-pound sections, completely full, as white as snow. The great trouble was in not having hives and other implements ready in time; and I will just tell you a little of my experience that I had last season. The middle of May I went to a carpenter here in Detroit; showed him one of your Simplicity and one of your 1½ story hives in flat. He promised to make me 60 of them, and to have the most of them ready by the first of June (the rest by June 15th.) After sending and going there myself about a dozen times, I received 10 of them. When I came to nail them together, there was no entrance on one side. I took them back again, and he returned them July 1st; but then I could not use them. I then told him to make no more. Then I sent to Mr. Bell, of Union City, Mich., for some hives. He had sent me a postal, saying that he was making hives like A. I. Root's, because he had the pattern to work by, from you; but when I told him they would have to be *just* like A. I. Root's hives, to be used two story high, he sent me back my money, and said that they could not be used two story high. Well, what was to be done? I sent to you, friend Root. Well, you sent the hives before I expected them, and that helped me out of the swarming trouble some. The reason that I ordered the hives here in Detroit, and by rail, was, I thought I could save the freight charges on them, at least some of it; and I knew you were very busy at the time, and I would have to wait a long while. But after all I had to send to you for them.

Now I want to come to the great swarming trouble. During the time that I was waiting for the hives, my bees commenced to swarm (the first swarm issued May 15, the last swarm, Sept. 3.) During the month of June, my bees were swarming at the rate of about 12 per day. Some would come out 2 to 5 times in one day. One day 14 swarms came out —nearly all first swarms; 4 swarms united, and alighted on a cherry-tree, 4 inches thick. I had to brace it to keep it from breaking over. It looked as if there was a black flour-barrel in the tree. I had the greater part of my old queens' wings clipped, which came very handy, so I could always make the swarm go back again. The reason I returned them again was, it was bringing me a little nearer to the time of receiving the hives. But finally the young and the old queen came out together. Well, there was no more stop to them. I lost about 25 nice tested queens. The bees would kill some of them by returning them so often. When three or more swarms would come out together, some of them would go in the wrong hives, and get killed; sometimes, when there were three or more swarms out together, they would all return to one hive. So, you see, I did get my bees pettry well mixed up.

The honey season was about a half-crop. With all my trouble, I received about 900 lbs. of honey, almost all in your 1-lb. sections, and about 25 lbs. of beeswax. The reason that I did not get more honey, I think, is, first, because I did not have the hives in readiness when they swarmed. Of course, some of them would have the swarming fever for about two weeks; they would not work any during that time; second, that it rained during the summer, especially during the white-clover bloom. It rained every day and almost every night besides, so the white clover was always full of water. It got no chance to get dry. If I had not had a large patch of raspberries, and the Simpson honey-plant, I would not have had any honey at all. One colony give me 60 lbs.; 6 gave me 50 lbs.; 12 give me 25 lbs.; the rest were scattered through the other hives. Sometimes I would take out about 500 section boxes, and would not get a drop of honey in them. That was not very encouraging, was it? I had over 5000 of your section boxes, in the hives during the season. Now, in the early spring, I put a section frame with sections and starters on each side, in the lower story. When the bees had started in them, I put the section frames, bees and all, up in the second story, then filled the upper story with section frames complete. The reason that I put the section frames and the second story on early was that I thought I could stop swarming (at least to some extent), and secure a good crop of honey. I did not want any increase in bees; honey was what I wanted. So, you see, I did all I could to keep my bees from swarming; but it was no use. During swarming season, I generally put 2 or 3 swarms in one hive (2 or 3 story hives), to have them strong. They would give 1, 2, or even 3 swarms; and some of them would not even touch starters in lower or upper stories. On some of them I put empty stories, just to keep them from swarming; but there was no use. Even the new swarms would swarm again after being in the hives about a month or so; but they would store no honey. Swarming was what *they* were after. Sometimes they would hang on the outside of the hive, with the empty upper story on. Well, they increased to about 115, but I united to 91, that I have now.

Detroit, Mich., Dec. 1, 1880. OTTO KLEINOW.

Your bees had what we call the swarming mania, friend K. If it will make you feel any better about it, I can tell you that friend Doolittle had about the same experience one season, and I am not sure, either, that he succeeded in devising any thing to prevent it, to his satisfaction. You of course tried the plan of hiving them on a comb of unsealed brood, did you not? It is bad to have such a quantity of partly filled and empty sections on hand, but they will come in nicely for another season; and those partly built out will be just what you want to get stubborn stocks to take a start in the sections.

The "Growlery."

This department is to be kept for the benefit of those who are dissatisfied; and when anything is amiss, I hope you will "talk right out." As a rule, we will omit names and addresses, to avoid being too personal.

GIVEN'S COLUMN.

ALTHOUGH your condemning my press was the means of cutting my sales square off for the time being, and made me feel that I was outrageously wronged, I can now see that it has been of more benefit to me than a standing advertisement, as it has brought the truth squarely before the people, and my fine prospects for sales this season I attribute to this. Whilst I am thankful for this, the motives I leave with yourself, and shall let by-gones be by-gones. I only ask that I may offer a little advice, as coming from one who has had experience, and hoping it may be a benefit to my brother-inventors that may yet come.

First. If you have asked a man to advertise with you, and taken his money, you should be very careful about condemning his invention; for, if you should be mistaken, surely this money is not a fit money to be used in those charitable objects you tell us of.

Second. If you have purchased from him, and are unable to get his invention to work, then sit down and write him wherein you fail; at least, give him some chance to help you. Don't presume you know all about it after seeing it a few hours, and that he knows nothing after working perhaps years on it. Take one step down from that high and exalted seat we often see you take, and at least tell him before you kill him.

Third. If you have condemned an invention, and find that all others who have bought it speak against you, you should then come down at least one or two steps; yes, you might be willing to come down among us—we might do you good.

Don't you know you have fitted a great many suits on some of us when we happened to growl a little about things you sold us that we could not get to work? Come down, now, and we will find you scores of those suits you have cut for us that will fit you so snugly that not a wrinkle will be found from head to toe. Come, now, and take for yourself a few of these. Again, we would advise the use of one kind of specs. Don't use a pair that will show a sample at one time as all that could be desired, and order from it, and then afterward use another pair by which you are able to look back through a space of 3 months, and see that same sample as being poorly made. Certainly it would be better to always use the good ones, and then you can see the imperfections in the sample before you order; or are the good ones intended for extreme cases?

We think it's your privilege to advertise what you please in your extra leaves of GLEANINGS; but for the part you sell to us for a bee journal, we surely have some rights. If our inventions have been sold through it and condemned in it, we certainly have the right to say through its pages that we will take back our inventions and return the money to all who are dissatisfied. There is much other advice we might offer; but as we are allotted just one column, we can not go further; but I hope these lines may be the means of some help for my many brother-inventors, and that GLEANINGS for 1881 may be conducted with more charity for all; that all useful inventions, whether manufactured in the Medina shops or invented and manufactured elsewhere, may be treated with due respect, and that we all may be a band of brothers, advancing hand in hand, step by step, onward and upward, and that no one may be found trying to exalt himself above his brother.

"For the day of the Lord of hosts shall be upon every one that is proud and lofty, and upon every one that is lifted up, and he shall be brought low."—ISA. 2:12.

Hoopeston, Ill., Dec. 8, 1880. D. S. GIVEN.

Why, friend G., you have no idea what a long breath of relief I drew when I got to the end of your letter. Visions of some awful thing that I might have said or done during the hurry of last season flitted through my mind, and of something, possibly, that could never be explained to any one but God, who knows the heart. I believe you are right, my friend, and that I should have more charity. I know I do not see my faults as others see them, and I am sometimes literally appalled at the horrible picture I see of myself, when some kind friend holds it up before me as you have done. Although I can not recollect it now, I presume I did solicit an advertisement of you; but I did it with an honest and sincere purpose of helping you, even though it should spoil the sales of my rollers. I had proposed to give you one of the best helps in the way of notices I ever gave any one, because I thought you an honest, hard-working inventor. When we got your machine off the cars, I was most grievously disappointed. Perhaps I should have reflected that, for the price, we could not expect a good finish; notwithstanding the jokes and smiles of Mr. Gray and Washburn, I stoutly stood up for it. The handle, being made of cast-iron, and left on the machine, was snapped off in transit, and I had first to have that repaired. The hands, I presume, had caught the general spirit, and decided the machine would not work, before it was tried. I gave them the directions, and when they decided it would not work, I tried it myself. Very likely I was nervous and impatient on account of the many cares that then weighed upon me. The machine was tried at different times, on several days, and the sheets were hung in the hives. They worked all right after the bees got them, but we found it very hard to get the sheet to stick to the wires long enough to carry them to the apiary; while, by our regular way, we could put them in quite rapidly, and have them stand shipping safely, long distances. As our room was limited, and orders pressing, there was no other way but to move the press into the back room, as I mentioned, that we might go on with our work and fill orders. It did not occur to me, until now, that I should have returned the money you paid me for advertising; but I will most cheerfully do it now, friend G. The principal objection to the machine was the dies; and, if I am correct, the pair sent me have never been used,—friend Heddon having procured a new set after he got the press from me. Did I not publish every favorable report from the press that has been offered, after others said I was mistaken? Now, friend

G., I want another machine, all complete for L. frames, and I will pay for it in cash as soon as received, or before, if you choose. If we can not make it work, I will pay you to come out here and show us how, as I did friend Faris; but please do not ever say again I object to certain wares because they are going to conflict with something I may have had for sale. Have you not all known me long enough to know that I am not thus selfish? I take greater liberties in recommending things on these pages, because I somehow feel that you know me,—the greater part of you,—and give credit for good intentions, if I am sometimes sadly at fault in judgment.

A REPORT FROM A BEGINNER'S FIRST THREE SEASONS.

As we have delayed our report for 1880 so long, we will try to make amends by giving you a condensed report of our business for the last three seasons, which comprises all of our experience as a bee-keeper.

We bought our first swarm in Oct., 1877, and wintered safely, without protection, on their summer stand. In May, 1878, we found a bee-tree, the inhabitants of which we safely transferred to a Langstroth hive. During the season we increased to 9 stocks, and took 50 lbs. of box honey and 150 lbs. extracted. Although the winter of 1878-'9 was very severe, every stock answered to roll-call on May 1st, 1879—thanks to chaff division-boards and chaff packing in outside boxes, as described in Cook's Manual. Taking an inventory Dec. 1st, 1878, we found we had 34 colonies and 900 lbs. surplus, one-half of which was in sections, and one-half extracted. Thirty colonies were in Root Chaff hives, and four were well packed in Cook's "overcoats."

TWO COLONIES IN ONE CHAFF HIVE.

Three of those in chaff hives were double, with a thin division board between them, and an entrance at each end of the hive, as described by friend Nellis. They all wintered safely, and on the first of May last we had bees in 35 hives.

The past season has been the poorest for surplus honey within the memory of the oldest bee-keeper here, many apiaries giving no income whatever. All we have to show from our 35 colonies in the spring, is an increase of 20 colonies, 500 lbs. extracted honey, 200 lbs. section honey, and 700 lbs. gross in combs, reserved for stimulative feeding next spring. The bees are all in Root chaff hives, twelve of which have an entrance at each end, with thin division board in the middle, each containing two small colonies with young queens. What do you think of this idea of a double hive to winter nuclei? Those I tried last winter did nicely; and I think, from observation, that if each nucleus is strong enough to cover three frames, they are just as safe with a thin division board between them as if they were united late in the fall, and one queen destroyed; and in the spring we have the extra queen for profit, worth at least half as much as the swarm.

SAGGING OF ALL KINDS OF FDN., DUNHAM INCLUDED.

We have used fdn. in the brood-chamber largely, both Root and Dunham, and see but very little difference, if any, in the value of the two kinds. Neither kind will sag or warp if properly fastened and given to the bees during fruit-bloom; but if given to a strong colony during warm weather, and a heavy flow of honey, both prove very unreliable. We had sheets of Dunham fdn., 4½ ft. to the lb., sag over an inch; and many of them broke down during the basswood yield this season, and they were in chaff hives too. Next season we shall try your method of wiring, and endeavor to have all not wired drawn out during fruit-bloom.

MAKING SIMPLICITY HIVES, ETC.

For our new swarms, artificial swarming, nuclei, queen-rearing, etc., we use the "Nellis-VanDusen-Simplicity" hive, and think it has several points of superiority over your Simplicity. We make all of our own hives, and fancy they are just as good as those furnished by the supply dealers, and they come a "heap" cheaper. In making our first chaff hives we followed directions in A B C to a dot, and when we had about twenty hives completed, we found that, instead of ¼ or ⅜ space between the frames in upper and lower story, we had fully ½ inch, and the same between frames and bottom-board. Every time we handle those frames and find the space between upper and lower story filled with comb, as it is sure to be, we feel a good deal like scolding somebody. If we figure rightly, the width of end-boards should be 9 inches, and side-boards 9½ inches, instead of 9⅛ for former, and 9⅝ for latter, as it reads in our A B C. Don't want to "take anybody's head off" about it, but suggest you make the correction, if not already done.

JOURNALS COSTING MORE OF THE PUBLISHERS THAN OF SUBSCRIPTION AGENTS.

When we last wrote you, we intimated that if you practiced the doctrine you preached in "Our Homes," you should furnish your own publications as cheap as anybody else. For this you put us in the Growlery; and, while there, friend Sayles has a whack at us, and accuses us of advancing a doctrine that "savors of Communism." Now, if bringing the producer and consumer, publisher and subscriber, nearer together, thus crowding out unnecessary middlemen, is Communism, then we plead guilty to the charge. The fact that others advertise to furnish Gleanings to single subscribers cheaper than the publisher, seems to us proof positive that either your retail price is too high or your wholesale price is too low. When you say that "Gleanings is a standard article" you "hit the nail squarely on the head," and you might have truthfully included the A B C. We have read all of the modern works on bee culture, and are a subscriber to all of the bee journals. Friend Sayles thinks if we had spent a little "time and mental effort" in obtaining 10 subscribers at the State Grange at the full price, and thereby pocketed $4.00, we would view the matter in a very different light. In answer to this, we would simply say, we have taken many subscriptions for the standard publications, including some for Gleanings, and have always considered ourselves well paid when we reserved 10 per cent for ourselves; and should we ever take 40 per cent profit on a standard article, especially from our brother-patrons, we should consider ourselves unworthy of the name *Granger*.

And now, friend Root, begging pardon for the length and broadcast shooting of this "report," and promising never to "do so" any more, hoping you will not consider anything I have said as a "growl," but only a little friendly criticism, I will conclude by wishing you all (middlemen too) a merry Christmas and a happy New Year. George W. Jones.

West Bend, Wash. Co., Wis., Dec. 9, 1880.

Many thanks, friend J., for your report and kind admonitions.—The Simplicity hive is so made that the shrinkage of the lumber can in no way affect any of the dimensions, except the vertical depth of the hive. Now, as all lumber will shrink, more or less, no matter how well seasoned and painted, we have allowed this ⅛ for shrinkage. After you have used your hives one season, you will find they will settle down,—at the very least, the ⅛ you complain of. Then you will have the standard ⅜, that has been so long decided to be about right. If I am not mistaken you will find some of the hives having only about ¼ inch; and if we have any more shrinkage than this, you will be pinching the bees; but even then, you will find some stocks that will build solid honey in this ¼-inch space. The Italians, I believe, are more addicted to such tricks. If you will grease the top and bottom bars of your frames with tallow, however, you can effectually stop it.—I did not mean any harm, friend J., even if I did put you in the Growlery; for I thought you were just about right. I too should feel guilty if I took from my friends 40 per cent for a standard dollar article; and it is by selling goods at a profit of 10 per cent, instead of 40, or even 25, that I have builded up such a trade on the counter-store goods. You know I enlarged GLEANINGS, and changed the discount from 40 to only 25 per cent after your letter last year. Well, unless I change my mind, the discount next year (please all take notice a year in advance), will be only 10 per cent, unless the papers are all sent to one address; and then it will be the same as now. This is done solely to correct the inconsistencies you have mentioned.

A STATEMENT THAT WASN'T TRUE.

STINGLESS BEES.

IN Mr. Hawley's Brazilian stingless-bee circular, alluded to in our editorials, appears the following:—

> But Rev. Mr. Clark, late editor of the *American Bee Journal*, the man who later accidentally got a bee in his mouth while drinking, and died from the effects of having been stung on the back part of his tongue, and, in short, others who have lost their lives in one way and another in handling bees, will not be apt to ask to be placed in the "don't care if they do get stung" army of bee-men.

While I was meditating sadly enough upon the suddenness of his death, and wondering that we had heard nothing of it before through different channels, I was most agreeably surprised to get a letter from friend Clark, and he didn't say he was dead then. I copied and sent him the above, and here is his reply:—

Friend Root:—

> Thanks for the above extract from Hawley's circular. I embrace the opportunity afforded by its receipt, to reply through GLEANINGS, and assure my apicultural friends in the United States, most of whom, I presume, read your journal, that I have not yet departed this life, and hope to be able to do a little more good in the world before I am called to leave it. I had a severe and painful experience in the way of a bee-sting, of which I gave an account in the *A. B. J.* for Sept., 1874. The sting was not inflicted "while drinking," nor was it inflicted on the "back part," or any other part of my tongue, but on the extreme point of the upper lip, just where the mustache divides. Among others who kindly responded to my account of the accident, was W. S. Hawley, who furnished me a liquid remedy for stings, which is certainly a very good thing. I never heard nor read of a bee-keeper, who accidentally got a bee in his mouth while drinking, and died from the effects of being stung; but I have known a great many cases of bee-keepers and others who got a far worse creature than a bee in their mouths while drinking,—even that which "biteth like a serpent and stingeth like an adder," and died from the effects of having been bitten or stung. The saddest feature of these cases was, that they took the venomous thing into their mouths, not accidentally, but willfully; not in the prosecution of an honorable calling such as bee-keeping, but in the foolish pursuit of dangerous pleasure.
>
> After a life of seclusion for several years, owing to ill health, I am now in active work again, and, among other multifarious duties, intend to act my part in trying to promote bee-keeping. I have not lost my interest in the science and art of apiculture; and, although I handle bees under difficulties, being, not like some favored mortals, bee-loved, but, for some unknown cause, bee-hated, I shall not let them alone while my eyesight is good enough to see through a bee-veil.
>
> The indications point to a great revival and expansion of bee-keeping throughout the Dominion of Canada. Now that the secret of successful wintering has been discovered, the chief obstacle to the prosecution of the business is removed. Yet I do not fear that it will be overdone by too many going into it, for it is only a small minority of the human race who possess the qualities necessary to success in this line. The exploits of D. A. Jones are doing much to draw attention to the possibilities connected with bee-keeping in this country, which, in regard to honey-producing resources, is probably equal to any on the face of the globe. WM. F. CLARKE.
>
> Listonel, Ont., Dec. 18, 1880.

Friend Hawley, unless you "rise and explain," we shall have to think badly of you, for aught I see.

A GLAD NEW YEAR TO GLEANINGS.

AN ACROSTIC.

A glad New Year to GLEANINGS!

God bless its patrons, one and all;
Long may the savor of its teachings
Abide in truth, with great and small,
Delivering them from Satan's thrall.

No matter though its lessons
Embody what to some seems new;
Waked not our Lord quaint musings, and brought strange truths to mortal view?

Yes: he arraigned fixed customs,
Except where truth and right bore sway,
And then, with one great offering,
Redeemed from death its helpless prey.

Then let the ransomed everywhere,
On grateful hearts his image bear.

Glad should we be, with sacred gladness,
Like Moses coming from the mount;
Expressing, even in our visage,
A happiness no words can count.
Nor need we shrink from pain and trial;
If Jesus Christ marks out the way,
No foe can harm us, and no shadow
Give darkness to our heavenly day,
So, now, God speed our upward way.

Cottam, Ont., Can., Dec., 1880. MRS. H. A. AWREY.

FOUL BROOD.

CROAKING like a bird of evil omen came friend Detwiler—"Foul brood, foul brood; perhaps you've got it on the yard now and don't know it." We looked into several of the least prosperous colonies, but found nothing wrong. I had never seen a cell of foul brood, never wanted to, and somehow never expected to. As the sum and substance of what I have read about the plague, I had a very incorrect idea about what to look for. I suspect that hundreds of the boys have just as poor an idea of what they should be on guard against as I had, and perhaps a few words on the subject will be timely. I expected the disease to be heralded by a dreadful smell, of the knock-you-down order. Doubtless it does smell bad enough in extreme cases; but in its mild beginning you smell nothing, unless you poke your nose almost into it, and then the odor is almost precisely that of common glue. I expected a mass of dead brood, spreading abroad like the rot in a mellow apple. In point of fact, the commencement may be in less than half a dozen cells, and no two of them near each other. I expected a disease which the bees themselves would be powerless to resist. From what I have seen, I think the bees sometimes hold the disease at bay for many months. I even suspect that they sometimes eradicate it altogether without outside help.

Having been posted by friend Det. as to what I should look for, it was not long before I found some of it. And while I meditated what was the best way to destroy them, bees, brood, honey, frames, hive, chaff, and all, I found more of it, and then still more. Five colonies certainly affected, and as many more on the doubtful list, all sprinkled through an apiary of 104 colonies! I'm in for it now. Don't you wish you were in my shoes? Meantime the season closes, brood-rearing stops, and the whole matter is adjourned over to next year.

How came I in this mess? I hardly know. Somewhat late in the season I noticed very many bees working on one precise line, and also coming in quite late and very heavily laden. I suspected at the time that they were robbing a bee-tree. In that same direction lies an extinct apiary. A farmer who kept many bees in the old let-alone way lost the most of them, and sold the rest to keep them from dying on his hands. Perchance those bees died of foul brood, and the swarm in the tree caught it from them, and mine brought home the curse when they robbed the tree. Curiously enough, the two colonies which are my champion robbers are not affected. Either they didn't get the disorder, or they had energy enough to stamp it out. Remembering the appearance of certain unprosperous colonies in times past, I am not without suspicions that a little of the disease, in a very mild form, has been hanging about the apiary these two years.

This matter of the different phases of the disease, and its different grades of virulence, needs light. It may be that there are really two diseases called foul brood; one caused by the fungus *Cryptococcus Alveario*, and the other by the *Somethingelsus Notsobadis*. In that case, I'll take the *Somethingelsus*. In the disease variola (small-pox), there is a morbid growth in the human blood, somewhat as in foul brood there is a morbid growth in the substance of the young bee. Two children may take the germs of variola from the same source, and one will become an encrusted mass of corruption over a large portion of the surface of his entire body, while the other will need parental authority to keep him from playing outdoors just as usual, each and every day the disease lasts. Between these two extremes there are all intermediate grades. I think, when we get at the truth of the matter, we shall find that the Cryptococcus produces just as wide a range of results.

What is the slightest perceptible touch of the disorder? I think, that a very slight growth of the fungus causes the young bee to give some sign of discomfort, which is recognized by the delicate senses of the bees, and that they respond by taking off the caps of the cells. Don't fly off the handle, gentle reader, and accuse me of charging foul brood in all cases of bareheadedness. I don't charge or believe any such thing. I merely suppose that the bees incline to pull off caps whenever there is uneasiness among the brood *from any cause*. They have no catnip tea to give them, and what can they do but to uncover and rub their little aching heads? The young bees so affected hatch out in due time (or a little later than due time), the least diseased becoming useful members of the commonwealth, and those more affected becoming useless weaklings. When the disease has reached its third grade of virulence the young bee does not come out of the cell at all, but dies, with his head thrust out and his tongue protruded at full length. I find so many in this condition in the affected colonies that I can hardly be mistaken about this being one phase. I may mistake in supposing that there are any milder phases. A fourth phase is where the bee dies before it is time to emerge from the cell, but after the various integuments of the body have become somewhat hardened. With matter at this stage, the cells can still be cleaned out readily, and the bees are still capable of holding the disease in check. One degree further, and they are nearly helpless. In the fifth stage, death takes place while the young bee is yet soft; and the body speedily changes to a mass of liquid glue, in which the fungus swims. To pull this stuff out of the hive is impossible, and the inability of the bees to keep their hive clean makes what is really but an increased virulence seem an entirely different disorder. Probably some of the more zealous of the workers try to get rid of the filth by *sucking it up*, as they would any other undesirable liquid, to carry it out and disgorge it. It may readily be imagined that such stuff can not be disgorged so completely but that germs of the fungus will remain in the sac. Every larva subsequently fed by such a bee must be poisoned by receiving some of the fungus with the food. I think much more brood is infected in this way than by the spores that cling to the hairs on the bee's feet and drop off in the cells. But I will wait till I see more before I surmise more. The worst combs I have yet found had less than one-half of the cells dead, and not over one-quarter of the comb affected at all.

CHAFF COVERING FOR WINTER.

A word now on a more agreeable topic. Laziness hath many inventions. Last year, in packing bees for winter, not having time to make the additional cushions I needed, I tore off generous pieces of muslin, laid them over the top of the hive, poured in chaff, tucked it nicely into corners, folded neatly over top, and—liked 'em so well that I'm not for making any more sewed cushions at all. A sewed cushion, when tucked down, is in a state of tension, and sooner or later it will crawl back and leave chinks. Folded cushions are readily made to fit all sizes and shapes; they will "stay put," and are almost as good as your loose-chaff arrangement. The ease with which they are emptied and boiled to disinfect them, is in their favor. The chaff can readily be changed if leakage wets it. Moreover, the cloths, when empty, come handy for a variety of purposes. Really, dear Novice, *do* we want our bees so we can not open them without deluging them with chaff? You didn't like that foundation machine that "ker-squashed" a waxen spray all over your apparel. Pity, then, the sorrows of the neat but helpless bees, and allow no dusty, musty chaff to be besnowed all down amongst them. E. E. HASTY.

Richards, Lucas Co., O., Nov., 1880.

If it is proper for one to hazard an opinion on foul brood that has never seen a hive of it, I would say, that I am inclined to accept what friend Hasty says. I do believe a real, earnest, faithful modern bee-keeper can rid his apiary of even foul brood, and without burning the hives and bees up either. I quite agree with him on chaff too; why, that is just what I have been doing, last winter and this too, only I used just a little loose chaff, to make cushions fit and fill perfectly; then, when a hive is to be opened, after taking out the cushion it is a very simple matter to push this loose chaff over to one side, while we turn back the covering over the frames enough to make our examinations. This can be done without getting any chaff on the bees. We do not have musty or dusty chaff in our hives, friend H., for they all have water-tight tin roofs; and, while I am about it, perhaps I should apologize a little for what I said about spattering the wax on my clothes. If friend Faris had not hurried matters, to see how many pounds he could make in 15 minutes, I presume the machine could be worked without any such unpleasant features.

DOOLITTLE'S REVIEW AND COMMENTS ON THE A B C BOOK.

IT will be remembered, that I offered our friend Doolittle $100, a few months ago, for a careful going-over of the A B C book, that he might point out its faults, and add such suggestions as his large experience might dictate. He has done this; and his remarks are of so much value that we shall embody the greater part of them in the book itself, as an appendix. Where obvious errors are pointed out, of course nothing remains but to correct them, and so these points need not be given here. Those who have the book will recognize where these remarks belong, by the readings. Those who have not the book will, I think, find the notes interesting and profitable.

ABSCONDING SWARMS.

CLIPPING QUEENS' WINGS.

Scarcely a queen need be lost, as a few bees will always gather around the queen; and by walking over the yard, and looking on the ground, this ball of bees is easily seen, and the queen picked up. It is not so easy, however, always to tell where they came from; but this can be done by keeping them till near night, and taking the queen from the bees, when they will return home to their own hives.

Very good indeed! The idea of letting stray bees find their own hive is a new one —to me, at least.

SAVING AFTER-SWARMS, AND BUILDING THEM UP TO GOOD COLONIES.

I can not agree here. With the after-swarms goes all prospect of surplus honey; and, if prevented, the old stock is by far the better. Wait 7½ days after the first swarm leaves, and, as a rule, the first young queen is hatched then. Cut all cells, and after-swarms are done away with.

PLURALITY OF QUEENS IN A SWARM.

I find that a plurality of queens is just as common in second swarms as in third; and I have had as many as half a dozen in a first swarm, issuing from the loss of the old queen ten or more days previously. During the height of swarming, the cells are not properly guarded, and thus the young queens run out.

CUTTING OUT CELLS, AFTER A FIRST SWARM ISSUES.

This is not sure, as the bees can rear more from the brood remaining; but, cut them after the first queen hatches, and you have a sure thing.

SETTING THE NEW SWARM IN THE PLACE OF THE OLD STOCK, TO PREVENT AFTER-SWARMS.

This is not a good plan with the Italians, as they will nearly always swarm after being thus moved; but with the blacks it generally works well.

AGE OF BEES.

HOW LONG BLACK BEES WILL LIVE, IF AN ITALIAN QUEEN IS GIVEN THE BEES IN MAY OR JUNE.

They will live 45 days, from three experiments I have tried.

ANGER OF BEES.

The following refers to my remarks about bees turning suddenly cross, after a severe rain or storm has washed the honey out of the flowers:—

Have you not made a mistake here somewhere? During a heavy yield of honey, our bees seem to be glad of a rest, and it takes at least 24 hours before our bees think of robbing, after a full flow of honey. We have taken off honey after a shower, as you speak of, when each bee was so full of honey that, if squeezed a little, she would throw the honey out on the tongue; and, if jammed a little, the honey-sack (filled with honey) would burst through the sides of the abdomen. After 24 hours has elapsed, or the season draws to a close, we agree with all you say.

I hardly think I have made a mistake in the matter, friend D.; but, very likely, more time had elapsed after the rain, than what I have given. I have noticed all you say, *immediately* after a very heavy yield; but so many others have spoken of having trouble in trying to extract, after a storm, that I can not but think my caution a wise one.

My remarks in the A B C in regard to artificial fertilization being impracticable, they have called forth some censure. In a foot-note, I have mentioned the experiments of Prof. Hasbrouck, and it is in regard to this foot-note that friend Doolittle writes the following:—

I thoroughly tried Prof. Hasbrouck's plan the past season with the sugar-barrel with a hole in the top and a glass on the inside. While I could get the drones and queens to fly together and drop to the bottom in the embrace, or laying-hold of each other, yet not one was fertilized.

In regard to this same subject of artificial fertilization, I remark that now, nearly every apiarist of 50 hives or more, has at least one imported queen. In regard to this remark, friend D. writes:—

> I can not agree here. I have had three daughters of imported queens from as many breeders, and none of them commenced with the stock I had taken pains to breed for honey. With the majority of apiarists, probably, your remarks are correct; but we have a few breeders whose queens are far ahead of a promiscuous importation from Italy,—at least, such is my opinion. Five hundred dollars would not hire me to breed all my queens from an imported mother, and let my present stock go down.

If better honey-gatherers can be obtained by going elsewhere rather than Italy, by all means let us have them. As friend D. now offers queens for sale, we can give his stock a very thorough test the coming season.

ARTIFICIAL SWARMING.

In the plan I have given, where one can provide a laying queen during the swarming season, I have advised simply moving a hive away and putting a new hive in its place, with the queen caged over the frames; and if the colony gets weak before the new bees hatch out, giving a frame of brood; or, in the absence of a laying queen, giving them a comb containing eggs only, from which to rear a queen. Friend D. makes the following objections to the plan:—

> You know my views on old bees as queen-nurses, and I think the same holds good here, and that this is almost the poorest plan given for making swarms. I know that they will bring lots of honey, for that is the instinct of old bees. If you had said, give this frame of brood when the swarm was made, I should have scarcely any objection.

In view of the above, I have altered my instructions a little; but I supposed it was to be understood, that where a queen was to be reared, I did not expect much of a colony until she commenced to lay; and I have then given directions to build the colony up full with combs of hatching brood. As a matter of economy, I would not make any colony a full one until they have a laying queen. In moving old stocks in swarming time, I have always found plenty of young bees in the new hive, of what I should consider just the best age for queen-rearing,—those, for instance, just bringing in their first loads of pollen.

HOW TO REAR QUEENS.

> The first-hatched queen will destroy all remaining queen-cells, providing it is not in the height of a flow of honey. If it is, our experience is, they will swarm instead. For my views on this, see *A. B. J.* for Oct., 1880—Doolittle's article.

The reference to the article on queen-rearing is, I presume, in regard to friend D.'s position that queens reared under the swarming impulse, are better than those reared in the manner I have given. If this were the case, should not apiaries managed on the natural-swarming principle, produce superior queens? There are plenty who have followed the latter plan all their lives, but I do not learn they have more honey to sell, than those who have made their swarms and reared their queens according to the methods I have given. It seems to me, friend D. and our good friend Prof. Cook too have been a little thoughtless in their condemnation of all queens sold for a dollar, as if they were necessarily inferior on that account,—especially after the great numbers of great yields that have been reported from the progeny of queens that were purchased for a dollar, and in the hands of A B C scholars at that, but it is possible that those reared from natural swarming will be better yet, other things being the same; and let us by all means give the matter a fair test. If friend D. can supply the demand for such, even at $3.00 each, we shall very soon have plenty of reports from them.

BASSWOOD.

> In a period of 12 years, I have never known basswood to fail to yield honey,—the very shortest season yielding 4 days, and the longest 20. I place basswood at the head of all honey-producing trees or plants as to yield. From it I once obtained 66 lbs. in 3 days, *from one hive.*

In speaking of our cut of the basswood, friend D. says:—

> This is a picture of which you may well be proud; for a better picture to convey to the mind just what basswood is, was never executed.

BEES.

BEES, HOW THEY GROW.

> You do not mention water as being mixed with the honey and pollen for food. If water is not mixed with this food, why is it so eagerly sought in spring and summer, and not at all in warm days in October and November? Now, I claim that many things point to water being one element in this food.

BUCKWHEAT.

> We have given up placing any dependence on buckwheat for honey. It has yielded honey only 5 times in 12 years, so that any was stored. See our report for 1880.

CANDIED HONEY.

SEALED COMB HONEY IN A CANDIED STATE.

> Sealed honey seldom candies in the hive as you say; but I never, to my recollection, had sealed honey away from the bees over winter without its candying.

SCALDING.

> How about changing the flavor as soon as honey is scalded? Our experience is, that honey that has been heated hot enough to scald is spoiled, or nearly so, in flavor.

CLOVER.

RED CLOVER FOR HONEY.

> If I understand you correctly here, you and I do not agree at all. I never pulled the blossoms from a head of red clover yet, but that there was honey in them. But I have frequently found the corolla so long the bee could not touch the honey, I think there is nothing in the world that secretes as much honey, year after year, as red clover; still, it is of little use except to the bumble-bee.

In our locality, the red clover certainly contains no honey, perceptibly, some seasons. I am always in the habit of plucking the heads and sucking out the nectar, whenever I find them in bloom; and whenever I can squeeze out quite large globules, I always, so far as I can recollect, find the bees gathering honey.

THE ORIGIN OF HONEY-DEW.

THE following interesting article in regard to honey-dew is translated for our columns by our proof-reader, from *Der Alsasich Bienen-Züchter* (a bee journal printed in Sarreguimines, Alsace, lately ceded to Prussia by France.)

Not long ago, as I was taking a walk one afternoon in a certain neighborhood, I came to a bee-farm. Our conversation naturally turned upon our pets, and the bad honey season we had just had.

"No more honey-dew falls down here from heaven," remarked my colleague; "and so our bees must die off by little and little."

"Neither from the bright starry heavens nor from the clouds does the honey-dew fall," I remarked. "It is simply the product of certain plants and trees; *direct*, when they exude sweet sap, or *indirect* when licked up by lice and excreted from their bodies." But this answer did not satisfy my friend.

"With my own eyes," said he, "have I seen honey-threads floating in the air; and with my own tongue have I, even when a boy, licked honey-dew from the leaves of the trees of the forest."

"And why not from the tiles of the roof?" I rejoined. "These must drip with honey-dew as soon as it falls from a clear sky."

"Mildew originates in the air also," he said; "and why can it not as well be the case with honey-dew?"

Whereupon I remarked, "Not *in* the air, but *by* the air—that is, by the change in the temperature of the air, the bitter, sticky dew originates on the hop-leaves and other vegetables, and sweet dew on the pine, larch, linden, oak, willow, ash, plum, maple, mulberry, etc. Honey is not a volatile substance, like water, and therefore can not change its form by becoming mixed with the air and falling again from the sky. A thousand observations prove that honey-dew is self-formative when plants and trees, in consequence of warm and damp weather, are very full of sap-shoots, and when the temperature, through the influence of the weather, thunderstorms, or gales, becomes suddenly lowered. By these means the ascending sap becomes suddenly hardened, and starts back; it then presses through the pores of the buds and leaves, and covers them. So long, then, as fine weather continues, and the morning dew falls, the moist honey-sap will trickle from the leaves. Toward noon the sweetness is somewhat stronger, and the falling drops form long honey-threads, which the currents of air cause to float around like gossamer. These honey-threads are especially noticeable in the vicinity of pine and larch forests. The bees eagerly suck up the sweet, exuded sap, carry it to their hives, and prepare therefrom a good honey; especially when they have aromatic blossom-honey to mingle with it. Pine honey, however, has a flavor of turpentine. To this exuded honey the air conveys a quantity of fungus, forming a hatching-place, and thus mildew is occasioned; hence the saying, "Mildew falls from the air."

"But when a heavy honey-dew falls," interrupted my friend, "the grass in the forest, as well as that in the vicinity, is covered with honey. I remember that once my shoes were all sticky and shiny from this cause. From whence, now, was this honey?"

"The sweet saps, which the shrubs and trees exude," I replied, "are not only brooding-places for various species of fungi, carried there by the wind, but they afford feasts, not only for the bees alone, but for leaf-lice. The latter lick up the sap voraciously, and spirt it out. From this a fine dust or honey rain originates, and which the air spreads all around the vicinity. When certain plants and trees do not of themselves yield sweet sap, one can often see a bunch of leaf lice and other kinds sitting on the buds and blossoms, in order to puncture them and suck the sap from the wounds and pores, and exude it again as sweet excrement. This dirt-mingled sweetness is also gathered by the bees, and forms the so-called leaf-louse honey; but this is such a poor quality that the bees, as soon as obliged to use it for winter food, become stricken with dysentery."

Bee Entomology,

Or Enemies of Bees Among Insect Tribes.

THE following is a correspondence sent us by friend Cook, and will doubtless be interesting to many who are studying our bee enemies.

THE HYLOCAPA AS AN ENEMY.

The first part of the following letter referred to the Hylocapa which he previously sent. He tells, in reply to a query from me, how it kills bees.

Lansing, Mich., May 15, 1880. A. J. COOK.

Your kind reply to my letter, sending the bee, was duly received. I have not yet found any more of the same species; or, at least, have not been able to catch them. I will send you the first perfect specimen I can capture. In regard to the manner in which he kills the bees, I would say, he would alight at the entrance, and when the bees would "go for him," he seemed to bend his body in (much in the same way a honey-bee prepares to sting), thereby crushing the mass of bees attacking him.

THE THIEVING HONEY-BEETLE.

I send you to-day five or six beetles which I found trying to force their way into one of my hives. The bees kept them out to-day, but could do them no injury. A few days ago I found one of the same fellows inside on the comb among the bees and honey. He had cleaned out the cell where I found him, and I do not know how many more. If you will give me any information through GLEANINGS, it will be appreciated. F. N. WILDER.

Forsyth, Ga., April 26, 1880.

The handsome beetle sent by Mr. Wilder is *Euryomia sepulchralis, Lac.* Its broad form—it is seven millimeters (¼ inch) broad, and only eleven (7-16 in.) long—short, lamellate antennæ, and short, fossorial legs, at once indicate its family relation to the May beetle, *Lachnosterna fusca*. This large and interesting family is named, from the Greek for beetle, *Scarabæidæ*. The very convex, triangular thorax, and short wing-covers point at once to the genus *Euryomia*. *Euryomia inda*, a somewhat larger beetle of very much the same form, is quite common in the Northern States; and when seen flying in the spring or autumn, is often mistaken by the novice for a bumble-bee. This latter beetle also has a refined taste, as it is not uncommon to find it buried in some luscious peach or mellow fall-pippin. The *Euryomia sepulchralis* is of a dark brown color. Across the elytra, or wing-covers, are several dots and short, wavy, transverse lines of gray, while on the truncated abdomen, back of each wing-cover, is a prominent reddish-brown spot. The entire body is thickly set with punctures, and short, light-gray hairs. From the habits of the *E. inda* we are not surprised to learn that this near relative has a "sweet tooth" that has tempted him to this larceny. It is to be hoped that his conscience will cause him to desist, as his natural coat of mail will make him fearless, even of the bee's formidable spear; and his size will make it difficult to shut him from the hive. For the present, we will rest his case.

Lansing, Mich. A. J. COOK.

My bees for the past month have suffered considerably, from the depredations of the mosquito-hawk (*Libellula.*) It makes its appearance about my apiary late in the evening, and continues until nearly dark. With long willow switches my little children bring down scores of this most terrible enemy to our little industrious pets of the hive. These insects are mostly found near ponds of water, on marshy lands, and low, damp lands. They lay their eggs in the water by a peculiar dipping motion, and always while in the act of copulation. The manner of meeting between the sexes is different from all other insects that I have ever witnessed. The female gathers the tail of the male in her strong jaws, and holds fast for a long time. In this position they fly just above the water, the female frequently dipping her tail in the water by an under curve of her long abdomen, and, I suppose, she deposits an egg in this operation. I now have a young one that has just winged out, for examination. I will try to catch two while meeting, and will send to Prof. Cook for dissection, to see if I am right in regard to the manner in which they copulate. They are here by the thousand, and destroy great quantities of bees.

I see, in Nov. No. of GLEANINGS, a description of a bee-eater, by Wm. Duke, of Kansas. From the description, I suppose it is the *Mantis religiosa*, commonly called "Devil's horse" and "Rear horse." This species has a pair of legs in front, resembling a person's hands when folded in prayer, and is frequently called the "praying mantis." The word *mantis* signifies prophet; hence we have "religious prophet." I should not think that he had much religion about him, for I am sure he never follows the golden rule, "do unto others as you would have others do unto you." He is a great scavenger; and, so long as he will stay in my orchard and let my bees alone we will be friends, for he is king among insects, making a meal of any other insect that comes in his way, when hungry. She lays her eggs in a close, compact row, like the roof of a house, on apple and peach limbs, which hatch in the spring. Spare the good prophet if you can.

B. F. CARROLL.

Dresden, Navarro Co., Tex., Oct 30, 1880.

EXPERIMENTS WITH HONEY-BEARING PLANTS.

THE past summer I experimented with about 40 varieties of annual garden flowers, to find out which bees work on most so as to produce pasture, and be an ornament to the garden. We also had already quite a variety of perennials, bulbs, and flowering shrubs. The bees work more or less on nearly all flowers except roses, deutzias, honeysuckles, lilacs, and a good many other shrubs. Among early flowering bulbs, the little grape hyacinth is visited the most. Crocuses, single and double hyacinths, some; many others, such as tulips, not at all. The bees work on nearly all perennial and biennial flowers. Pansies and sweet-williams are their favorites. Among the annuals, the *Phacelia congesta*, a little blue flower, and a very clean, neat border plant, beats every thing I have had so far. It is more than equal to the sweet clover; begins to bloom earlier, stands the hottest weather, and the bees fairly swarm on it from early morning till dark; and, after several light frosts, next come portulacas and resedas. Spider plant I don't like; it takes too much ground for the amount of bloom, allowing only one plant to grow. The body was as thick as my arm, five feet high or over. It stood in front of some hives, and the bees did not notice it till it had formed seed-pods from first blossoms, and I had stuck a few bees on the drops of sweetness. I don't think it is worth the ground it takes up. Bees prefer to work on flowers where it takes more work in getting to it. Last March my bees would go into the pump-spout for water when they had a trough filled with corncobs and clean water before them; and on our sidewalk are two sugar maples, out of which the sugar-water came pouring from little holes the woodpeckers had made, so that the bark of the trees turned black, and the gravel around the maple-tree was wet; but not a bee would go on it, as bad as they wanted water. As soon as I rubbed the woodpecker holes around the trees full of candied honey, my bees began to swarm on it as long and as often as the sap ran, so that people got afraid to walk or drive past near the walk.

I introduced two Cyprian queens to two extra good Italian hybrids in October, and in one week all available room was full of brood, while none of the other stocks had any. I am very anxious to see their working qualities next season.

GEO. L. HOLLENBACH.

Noblesville, Ind., Dec. 1, 1880.

May I take the liberty to suggest, that some of your ideas are a little unusual, friend H.? Our bees certainly prefer to work where they can get the honey the easiest; and a comb of unsealed honey, left carelessly outside the hive, seems to be the greatest temptation to them, of any thing I know of, because it is so easy to get the honey. We find it the same with the Spider plant; but when there is only one single plant, and that right before the hive, I am not at all surprised to learn they never found it. Some of our friends have laid bunches of grapes on the hives, and because the bees did not attack them there, have decided they would not "eat grapes" at all. If I am correct, bees have to learn to get honey from any flower; and unless the flowers are in great profusion, say rods of them, or a whole tree full, they may miss them entirely for a whole season. After the bees get started on a plant, just as they did on those maple-trees, it is a pretty hard matter to stop them. After they once get to robbing a hive, it sometimes seems as if nothing short of inch boards would hold them at bay. At such times they will puncture grapes and strip the vines; yet we have but a few cases on record where they have got so crazy about it as to do this. It was just so with your watering-place. They had not got accustomed to going there.—In our locality, phacelia is but an indifferent honey-plant. I should not want to waste time on any plant exclusively for honey, unless it yielded honey so the drops were visible to the eye. Please accept thanks for your report, friend H.

BEE-STINGS AND RHEUMATISM.

WHEN you published my inquiries concerning rheumatism and bee-stings, I hoped to receive at least five hundred replies; but only 17 have responded, and of that number, two claim to have been entirely cured, and one somewhat relieved.

Mr. John C. Greenleaf, New Boston, Mass., age 31 years, engaged in bee culture 5 years, had rheumatism prior to handling bees, but is relieved entirely. He receives three or four stings a week.

Mr. C. H. Chapman, Easthampton, Mass., age 48 years, has been in bee business 3 years, and had rheumatism prior to handling bees, but received complete relief in six months afterward. He was badly afflicted in one shoulder and arm.

Mr. W. C. Hutchinson, Acton, Ind., age 37 years, engaged in bee culture 7 years, had rheumatism prior to handling bees, but no severe attack since.

Two report having contracted the disease after engaging in bee culture, and received no benefit from stings; two had it previous to handling bees, and likewise received no benefit from stings, and the others never had rheumatism.

I can not accept your theory, that the benefit, if any, from the virus of the bee, is merely that of a counter-irritant, for that it does have a peculiar effect on the blood is seen in the non-poisonous effect of the stings on those who have been often stung. Such care very little more for stings than for mosquito bites. The investigation so far is too meager to prove any thing, and I shall try again.

Otwell, Ind., Dec. 6, '80. W. W. LEMMON.

I too, friend L., can not accept my former theory, after the evidence that has been brought forward. I am more rejoiced than I can well tell you, that there seems now very good evidence that bee-stings may indeed exert a curative effect in some cases of rheumatism; and who knows if they may not also do the same with many other diseases? I do not draw this inference from the cases above alone, but from letters that will be found elsewhere in this and other numbers.

CELLAR WINTERING,

IN WHICH OUR FRIEND MERRYBANKS IS UNJUSTLY ACCUSED.

FRIEND NOVICE:—I rise to say, that, having read many of the discussions in the bee conventions on wintering bees, and also many communications recently, from different ones in our bee journals, one would almost think, from the conclusions reached, that wintering outdoors in chaff in some form, is the correct thing to do. We hold, that any protection is better than none; and, by the same comity of reasoning, the nearer we come to complete protection, the better the way. Now, for a few hard facts and reasons.

For about ten years I have wintered, on an average, 25 swarms of bees in my cellar. I have never lost a swarm in wintering in this way. I put them in, usually, about the 20th of Nov., and put them out from the 10th to the 20th of March—never giving them a fly during that time. My cellar is dry, and cemented on sides and bottom—frost-proof, and kept so dark that it is the "blackness of darkness." For an illustration: I once lost my light and points of compass at the same time, in this cellar, and, after feeling around and not making any headway, rather than to bark my shins against the butter-firkin, pickle-jar, wash-tub, and so on, all of which I would be pretty sure to find, I cried out, for once in my life, for "light from above." Parenthetically, let me say, there was no *cider* in the cellar, to the best of my knowledge and belief!

I recollect that, some time last winter, a gentleman—I think his name is A. I. Root (some of you may know him), asked how bees were wintering in cellars, and seemed to fear great loss from bees getting uneasy, as the weather was warm and changeable. No one, I think, answered the inquiry. It was an important question, and should have been answered by all keeping bees in this way. I will answer now though late: My bees were never more quiet, or wintered better, than last winter—eating but little of their stores. The reason is plain enough. If your cellar is completely protected from the severest cold, *it is just as well protected from sudden heat;* and, although the warm weather may hold for some time, yet the change is so gradual, the bees do not mind it. Now, a few words with my chaff-wintering friends.

Of all the chaff hives I have seen, I think our friend Novice's is as good, if not the best, yet brought out. They are just the thing for springing and summering bees, and then I can just pick them up in the fall and put them in my cellar without fussing as I do now with some of mine by placing rye-straw mats around and over them, besides fine hay or leaves on top. Yes, I rather like a chaff hive. I've several of them, *and I'm always careful to put them in the cellar.* Try it.

See where he comes, with his old nag! Perched up on a small cargo of dry-goods boxes, is our old, honest, moon-faced friend, Mr. Merrybanks (see GLEANINGS.) He has about one-fourth the number of boxes he wants for his 50 hives of bees, when all together. What a pile! Mr. Merrybanks is always alert and abreast with the times; don't believe in exhausting his natural forces, consequently will not carry his bees in and out of the cellar any more. Oh no! Mr. Merrybanks last fall took only a day for himself and nag to go to one of his neighbors to get a load of chaff (no work, you know), and store it away; and now he is ready for business. Mr. Merrybanks pours about three or four inches of chaff in his store box, picks up his hive, and sets in said box; bores a hole, and puts in a spout, or something for passage for bees; puts in more chaff, pressing it down until full, and then puts on the cover. Mr. M. soliloquizes: "Let's see. About how many hives could I have picked up and put into my cellar while I have been fixing this one? Just look at that lid! I hadn't thought; that cover will leak; just look at the cracks! By jiminny!" Don't swear, Mr. Merrybanks. "Oh! I never do. But I'd like to say something *strong*, all the same. It will take me an hour to fix the thing decently." Then Mr. Merrybanks has another happy idea—just the thing, you know. So he gets a big box, big enough to hold four hives;

puts in entrances on each side; puts in chaff and hives, and finishes up packing as in the other case; seats himself on a hive, and, soliloquizing, viewing his work,—"Merrybanks, you're a 'brick;' you are an inventor; four to one box; almost as quickly done as the other. That's business, and—and—ingenuity (that's the word) combined. But, it does seem as though I never saw so many knot-holes and cracks in a box before, in all my life. The cover has just as many cracks as the other, and longer too. And then, I can't say that it is a pretty thing to look at. I guess not! And what will my wife say? 'Mr. Merrybanks, dear, what building are you erecting? a pig-pen, eh? and right in the middle of your pretty bee-yard?' Oh, oh! call that invention a pig-pen! 'And then, what if Root, A. I., should visit you? They say he has an eye for the beautiful.' So much the worse for his eye! And then, how would a whole yard of them look? My! It would be just my destiny! Some insurance agent or lightning-rod man would be always scenting a job; that settles it, Mr. Merrybanks. Now, Merrybanks, let us reason a little about this wintering business." [Mr. Merrybanks reasons.] "Suppose a winter as warm as the last, bees outdoors in chaff hives would be likely to fly as often as once in two weeks. This must exhaust their stores badly; while in the cellar the opposite would be the result. Score one for cellar. If the winter was extremely cold, nearly the same result would follow. Score two for cellar. And as the difference in consumption of honey between wintering outdoors and wintering in a good cellar is anywhere up to 6 lbs., we'll say 3 lbs. per hive in favor of cellar; and honey at 12½c per lb., gives 37½c; and 50 hives gives $18.75, which would give me enough to pay for the labor of putting my bees into the cellar for twenty years." And the last we heard of Mr. Merrybanks' soliloquy, as he turned a corner of the honey-house, was, "I've been a simpleton, but I've got a good many close connections."

Amboy, Lee Co., Ill., Nov. 8, '80. R. H. MELLEN.

RAMBLE NO. 1.

AT THE COUNTY FAIR.

We frequently find a leisure moment to get away from our home duties, my wife and I, and at such times we make a flying visit to some relative or friend or bee-keeper; and now it refreshes us to get away from the daily routine of home life, and talk potatoes and cheese, and the prospect of prices for these two great productions of our county! In giving our experiences in our rambles in the interests of bee-keeping, we will first ramble to our county fair.

We have exhibited nearly every year at our annual fair; and owing to this fact the premiums have been increased from $2.00 to $25.00. This year I was induced, by the promise of a good central location, to make a grand show on my own hook and under my own canvas; so, after ample preparation, James and I hitched old Billy to the load and bid farewell to wax, bees, and honey, and off we started for the fair. Our better half sent her old shoe after us, and waved her gingham apron while we passed down our "Linden Avenue." When we reached the fair-grounds, we came to the painful realization of the uncertainty of the word of the managers of a county fair. The good central location I was promised was reserved for a cheap dog-show, for which the committee on rentals received a fee; so the dogs took the preference, and the bee-keeping industry was put behind a ready-made-clothing tent and another show. We pocketed our disappointment, and made the best of our poor location; and though the crowd did not find us, the bee-keeping fraternity were around us more or less during the four days of the fair. Our show consisted of comb and extracted honey, and all appliances used in the apiary, and three swarms of bees. The latter were in an inclosure of wire cloth, open at the top, and could be seen at work at all hours of the day, and people could see us handle them. Our one-frame observation hive attracted a great deal of attention. The queen and her subjects were a great curiosity to those who ordinarily dare not approach a hive of bees. We came across some of our peculiar friends here, who were skeptical in relation to queens and drones; and our friend who believed the drones laid the eggs and then sat on them until they hatched had his theory somewhat disturbed by seeing the queen deposit eggs especially for his benefit.

Our extractor, foundation machine, and smokers, called forth an unusual amount of questions, both serious and comic. Our show enabled us to give much information to the public at large about bees and honey. We found our bee-keeping friends ready to lend a helping hand, and Mr. Harris, of Sandy Hill, made quite a display of bees and honey. Whenever we have become acquainted with bee-keepers in our own and adjoining counties, we find them very hospitable. We will try to ramble to some of their homes, and tell you of their bees and methods of raising honey. JOHN H. MARTIN.

Hartford, N. Y., Dec. 2, 1880.

May I venture one suggestion, friend M.? Much complaint has been made of the unfairness of officers at the fairs. While I am about it, I might as well add, that I am one of the complaining kind myself,—perhaps at conventions as well as fairs; but I am going to try hard to get over and out of it. Well, I would make a bargain with the managers, beforehand; and if you want the best locality, pay for it too. You should be able to sell honey enough, and other things, to pay all expenses. If I am correct, I had my choice of location at our last county fair, and paid $14.00 for the same; but I had a very large stand. If good people, representing good, wholesome industries, would take these eligible points, there would be less of the swindling and wheel-of-fortune work at our county fairs. A man offered $50.00 for the privilege of selling beer on our fair-grounds, and he came pretty near getting it, because the association was behind, and short of funds. If one or two (I do not know but I might have said only one) of our staunch temperance and Sunday-school men had stayed at home, just that day, the beer-vender would have had it, and we should have had such a scene with the boys of our village as they did in a neighboring town where beer was sold on the fair-grounds. Shall we not go to the fairs, and carry our things and our influence too? I presume it will be safe to say the same of conventions; yes, and I think, while we are about it, we might (or *I* might) promise not to get offended.

BONHAM'S IMPROVED PROCESS OF MAKING COMB FOUNDATION.

PATENTED NOV. 9TH, 1880.

THE machine consists of two semi-molds, or plates, made of best quality of dental plaster. The frames which hold the plates are put together with strong butts, and so hinged that the frames are thrown half an inch apart when the mold is closed. In this way the faces of the plates are raised ¼ inch above the wood. On the back of each plate, a convenient and substantial handle is firmly fastened, by which the machine is easily manipulated. To use the mold, open wide the plates so that the face of one is on a plane with the other. Having previously wet the mold, place the face of the machine on the surface of the melted wax; raise the plates and immediately close them, exerting some pressure, but not slapping them. Dip the mold then into a water bath, *not too cold*, to chill the wax; open the mold, and your sheet thus molded will be easily removed. You need wet the molds only *occasionally* before dipping on the wax, as there will be *no trouble* about shedding. After you have made a few sheets, and got things started up all right, it is nice work to turn out the beautiful sheets of fdn. If you want heavy fdn., do not have your wax very hot; if light fdn. is desired, have your wax pretty hot, and exert a little more pressure on the handles of the mold. To make starters for section boxes, I use a smaller mold.

The advantages of my process I claim to be these:

1. There is necessarily no daubing of wax, as the plates are raised so that no wax need touch the wooden frame, unless dipped too deep into the wax.

2. Its cheapness. With care it will last a long time. The handles give strength and support to the plates.

3. Less dipping in water to make shed.

4. You can work up all your wax, thus enabling you to conveniently work small lots of wax. You can have your wax floating on hot water, if you wish, so that you need never scorch it.

5. Fewer boxes and vessels are required. All you need is a tin basin about 21 or 22 inches square (for L. frame), and 4 inches deep, to set on a common flat-top cooking-stove, in which to have your melted wax, and a wash-tub, or any vessel that will answer for a bath.

6. Both sides of your fdn. sheet are made precisely alike, unless your mold is wrong. Two semi-sheets are molded; *i. e.*, their faces, and put together back to back before chilling, not molding one side and pressing the other, as in some machines, thus having wax of different degrees of hardness or density in the same sheet.

7. The fdn. being molded, the wax is in its natural state, and hence does not sag. Therefore, no wires are needed to prevent sagging.

8. It is the "machine for the million."

A. F. BONHAM.

Seven Mile Ford, Va., Nov. 29, 1880.

There is something quite ingenious about your idea, friend B.; but the idea is not new, if I am correct. It was the first plan I tried in dipping fdn.; but as I did not succeed, and you have, I shall have to presume you have got hold of some idea I did not have. I do not like that about its being patented, friend B.; but as you have put it there, we let it stand. It seems to me you have wasted just so much money. Friend Faris now writes he has succeeded with metal plates, and if that is the case, he is, most assuredly, away ahead of all. May God speed and bless you all, my friends, in your experiments! but I hope you won't think it will pay to have the ideas patented, even if you do succeed.

GREAT YIELD OF HONEY FROM FIREWEED, ETC.

I AM almost a beginner, having kept bees only 5 years. When I began, I could get only 25 lbs. (or less) of surplus from a colony. I was the seventh one in this town to try bee-keeping. The other six had lost all of their bees when I commenced. Three years ago I began to study the habits of my pets, and to take better care of them. Since then I have received from 100 to 125 lbs. surplus per colony.

I believe that we have a fine bee country here. There are thousands of acres of hard-wood timber, consisting of rock maple, soft maple, birch, beech, etc., etc. The clover very seldom winter-kills. In the spring the fields are yellow with dandelions, followed immediately by honeysuckle or white clover. But the greatest plant for honey is the fireweed, called, by some, mooseweed, bloodweed, etc. It springs up the next year after a forest fire, and continues about 3 years, when another fire is needed to renew it. It grows from 4 to 7 feet high, and usually commences to blossom about the first of August, and continues in blossom 8 or 10 weeks. It bears a bright purple flower, and somewhat resembles phlox. In September I had occasion to visit a lake four miles from my place. The whole distance (after the first half-mile) lay through a perfect sea of purple flowers, with the honey glistening in the blossoms, and, in some cases, a drop hanging in the center of the blossoms. There were thousands of acres in one solid body, loaded with nectar, and only a few bees around the outer edges. The honey from this plant is a pure white, and has a fine flavor. I have sent some to the cities of Massachusetts, and it sells well, and my customers always praise it. I presume that this plant grows in all of the northern timbered States. Why has it not been mentioned among the great honey-plants? There are some bee-keepers in the neighboring towns who are producing honey by tons; but bee culture is in its infancy here yet.

E. TARR.

Castle Hill, Aroostook Co., Me., Nov. 18, 1880.

Well, I declare, friend T., I do not know but that we shall have to drop the Spider plant, and go for fireweed if that is the way it does every season. Your statement will, I fear, almost set some of the A B C class crazy. When I was in Michigan I saw some of the most beautiful white honey, and of what I should call a most exquisite flavor too, that was said to be fireweed honey. The woods were then full of it, but it had gone to seed, and I was under the impression that it had a white instead of purple blossom. Are there different varieties of fireweed? and what is the color of the blossom? Hurrah! Gray's Botany explains it all. The kind you speak of, friend T., is (hold your breath) *Epilobium augustifolium*. Don't you think it ought to bear honey? Give us some seeds, friend T., and don't think of monopolizing all those miles of honey away down there in Maine.

Heads of Grain,

From Different Fields.

BLUE THISTLE; HOW TO RAISE THE PLANTS.

SINCE it has been shown that blue thistle is not a thistle at all (see p. 466, Oct. No. of last year), we may welcome it among our honey-plants. I had thought of calling it by another name; but as the present one, blue thistle, is in such general and widespread use, it would probably be a hard matter, should we undertake it.

If sown in winter, sow in a small box, not larger than 8x10 inches, nor deeper than 6 inches. Fill even full with leaf mold and sand, mixed; then sow seed on top. On this, put ¼ inch of same mixture, and then with a board press down level, then moisten a little. On this, place a 10x12 glass to prevent moisture from escaping. In 4 or 5 days, the young plants will come up. Then remove glass, place box in a warm window, and as the plants grow, transplant to larger boxes; and when warm weather comes, set out in almost any kind of soil, and by the last of July you will see a fine lot of blossoming plants with plenty of bees on them. J. L. BOWERS.

Berryville, Va., Nov. 29, 1880.

CANDY-MAKING; A VALUABLE SUGGESTION.

Allow a novice to make a suggestion relating to the formula for making candy for bees, in winter. Instead of mixing your sugar and flour with water, and boiling it, first mix sugar and water, and boil, as suggested in A B C. When done, take it off, and then, to the amount of flour that you wish, add just enough of the hot syrup to make a batter, with all the lumps worked out. Then pour this batter slowly into your syrup, and stir it vigorously; then pour. By this method all danger of scorching is avoided.

Kirksville, Mo., Nov 27, 1880. I. D. PEARCE.

BEES LEAVING THEIR HIVES IN COLD WEATHER.

I have a very large swarm of Italians that are acting so strangely that I wish to ask you if you know what I can do to quiet them. About two weeks ago I noticed they were flying out. It was then so cold that they would drop into the snow within five or six feet of their hive, and they continued to do so right along through the last cold weather up to last Friday, when I fastened them in by nailing wire cloth over the entrance. They will now come down to the entrance and try to get out, and they will stay there until they die in great numbers of cold or hunger, I can't say which. They are in one of your chaff hives, with a cushion that fills the whole top. I laid this off for two or three days, thinking it might be too warm. It is now over them, with one of your wood mats lying loosely under it, the entrance is all open, and they are on eight frames, with one division-board on one side of them.

Ravenna, O., Nov. 20, 1880. J. C. CONVERSE.

The cushion is not too warm; in fact, I fear it is the opposite. Put some loose chaff under the cushion so as to make all tight above. I should be inclined to think the trouble comes from a sort of dysentery caused by unwholesome stores. When bees are so affected as to come out of their hives in cold weather, it is a pretty hard case, unless the weather changes enough so you can take away all their stores, and feed them on pure sugar, say a syrup made of granulated sugar, or granulated sugar candy.

FIFTEEN NEW SWARMS FROM ONE IN ONE SEASON; GOOD FOR TEXAS.

The queen you sent to J. J. Taylor came all right. My 154 stands of bees are doing well, and are still gathering some honey. I have not killed their drones yet. I had 85 swarms of bees come out from July 26th to August 27th. I extracted all the honey from all of my young swarms twice, and all are full now. The fore part of the season was bad. Bees gathered very little honey till September. Since then I have taken 3389 lbs., as nice as the nicest extracted. I find ready sale at 15c. I had one stand of bees last spring which sent out 3 swarms. In July they sent out 3 swarms. The 3 swarms that came out in the spring all swarmed 3 times apiece. That makes 15 swarms from one hive in one year, and all in good condition for winter; that is, if winter comes. Sometimes it don't come here.

R. DEVENPORT.

Richland Spring, Tex., Nov. 15, 1880.

BLOWING BEES OUT OF THE HONEY-BOXES.

A bellows is the best thing that I ever tried or read of to get bees out of open-bottom boxes. By blowing in at one side, the reaction of the wind will bring them out at the other side in a stream. It is a well-known fact, that bees, if allowed to remain long on comb honey after it is taken from the hive, if there is no honey coming from the field, uncap a portion of it. Therefore, we should hasten to remove them. A bellows will do it quickly. My bellows is made of boards 11x14x⅝, rounded off and brought to a point at one end. F. C. WHITE.

Euclid, Cuyahoga Co., O., Nov. 12, 1880.

Quite an idea, friend W.; but will not our smokers answer just as well as a bellows made expressly? And do you think a stream of pure air better than smoke? I often blow bees from the sections with a smart puff of my breath; but it is apt to make one dizzy, to try to blow off a great many Italians. I presume we want a pretty good-sized bellows to make them "git" "right fast."

A GOOD REPORT FROM FLORIDA.

As it is now Oct. 8, perhaps I had better hand in my report, although my bees have begun to gather quite fast in the last few days, and to-day they are fairly boiling out of some of my hives. So, here goes: Spring count, 14; increased to 40 by natural swarming and dividing, when they were about to swarm naturally; comb fdn. used, 0; extracted honey, 1900 lbs.; price obtained in Boston, $1.10 per gal.; price obtained in other parts of Massachusetts, 12c per lb. The parties who sold the honey said, in their returns, "Your honey is the finest that ever came to this market from the South, and the price obtained is from 15 to 20c higher per gal. than other honey is selling at here." I will also state, that if I had let my bees do as they wished, I should have had at least 20 swarms more; but as it took me 3 months to get a bill of lumber from Jacksonville, I could not make hives for them, and so I kept them back from swarming. This has been an unusually poor year for bees and honey here, and many have got neither honey nor increase from their hives. I am still ahead, although the gale that wrecked the steam-ship Vera Cruz and several other vessels within a few miles of me, destroyed 14 swarms for me. The rest are doing well, and are in good shape for winter. The way the gale destroyed the bees was by blowing down two large pine-trees upon the hives, and crushing several of them. Then the rain drowned the bees, and, as I was away from home, the exposed honey set the rest to robbing, and I found a fine "kettle of fish" (no bees) when I got home. W. S. HART.

Smyrna, Florida.

Pretty well done, friend H. Over 135 lbs. to the hive, and the original number almost trebled. Perhaps we had better go to Florida, after all, and raise oranges and keep bees.

BLACKS AND ITALIANS.

I commenced the season with 4 colonies—3 blacks and one Italian. The Italians swarmed May 6th, and as they seemed very strong, I opened the hive and took two frames that had queen-cells on them, and, with the adhering bees, made a nucleus. This, I thought, would put an end to any after-swarming; but they swarmed again on the 19th, and filled the brood-nest full of honey, but refused to work in the boxes. The whole ten frames were solid sheets of honey, and they looked nice, for they were all full sheets of fdn., built out smooth and straight. I had no extractor, and so I took half of them away and gave them to the other swarms, and replaced them with frames filled with fdn. My black bees gave me 40 lbs. of surplus to each colony, and did not swarm. If this is the usual way of the Italians, I prefer the blacks. W. E. FLOWER.

Shoemakerstown, Pa., Dec. 6, 1880.

QUEENS BEING THROWN OUT OF THE HIVE IN COLD WEATHER.

Immediately after the recent cold snap, two of my strongest colonies of bees, in box hives, threw out their queen. This is unaccountable to me. What is your theory? and what would you advise me to do in the case? They were very strong colonies, and had not been disturbed. A. M. DUNN.

Rutland, Meigs Co., Ohio, Dec. 4, 1880.

I would not do any thing at all, friend D. If I am not mistaken, it is only the old queen that is dead, and the young one remains in the hive. At any rate, you can do nothing now, except to mark the hives and wait until spring. When the weather is warm enough for them to fly, give them some brood and let them raise a queen, providing they have not one already.

SHIPPING BEES FROM THE SOUTH, INSTEAD OF FEEDING THEM THROUGH THE WINTER.

I apprehend there will be a good demand for bees next season if the winter holds out as it has begun. Many colonies will die from starvation—more than usual. There was no surplus honey in this (Kane) county this year, and many colonies have already *starved*. I brought 190 strong hives to this county last May from New Orleans for Perrine. When we got here, many of them were strong enough to swarm. We have received no surplus, and no swarms; in fact, they would not average 5 lbs. of honey in brood-chamber in October. Many have since *starved*, as Perrine would not feed them up for winter. We do not now expect to winter through a single colony. We do not care if they all die, as we can restock the combs next May with strong nuclei from the South at less expense than it would have cost to winter them in safety. I wanted to kill them all in October, and save the honey for spring; but Perrine did not instruct me to do so, for which he is now sorry. These bees are on a par with most of the bees in this county. Marvin, Oatman, Thompson, Way, etc., have fed largely, to keep their apiaries alive; but I doubt their being in good condition next year in time for the honey harvest. Marvin has fed 2500 lbs. of old extracted honey to one of his apiaries of 100 colonies; but it won't pay, as the honey is worth about as much as the hives, bees, combs, honey, and all. It would have paid him better had he killed the bees in October, and restocked next May, before fruit blossoms.

M. M. BALDRIDGE.

St. Charles, Illinois, Dec. 9, 1880.

I presume our readers are well aware that friend Baldridge has had much experience in keeping bees, both in the North and South; and, although he makes some very good points, I do not believe we shall ever prosper by killing our bees after the honey season is over, with a view of buying more in the spring, shipped from the South. It is expensive and troublesome to feed back the honey, or even a substitute, I know; but I should not extract, and thus be obliged to feed back; that is, I should not unless it shall so happen that bees will die on natural stores so much faster than they do on stores of pure sugar. Friend Jones, as I have before mentioned, is very positive that it will pay to replace the honey with stores made from granulated sugar; and as reports are already coming in of bad losses from dysentery on natural stores this winter, it may be well to consider this matter.

WILLOW AS A HONEY-PLANT.

The best variety for bees is what is called "Pussy Willow." It is a shrub or bush, that grows about 8 or 10 feet high, and is covered with blossoms and bees early in spring. In fact, it is the very earliest thing that blooms. I have one near my bees, and it is interesting to see them at work on it. It naturally grows in wet ground, but will grow in dry ground. My neighbor has one on very dry ground, as an ornamental bush. They can be propagated, simply by sticking cuttings in the ground. They can be furnished one year old for 10c apiece. I shall start a lot in spring. They can be sent by mail, including packing, 2 for 25c., and any one who has only one, can, after that, grow his own by the 100 or 1000. My bees gathered pollen this year, Feb. 26th. This is the earliest year yet. M. D. DU BOIS.

Newburgh, Orange Co., N. Y., Dec. 7, 1880.

QUEEN-CAGES FOR ANOTHER SEASON, ETC.

We started in the spring of 1880 with 15 stocks of bees, and took 202 lbs. of comb honey, and 917 lbs. of extracted, making a total of 1119 lbs., and increased to 23 stocks, and all are in good order to go through the winter. We also raised 27 Italian queens. Our main source for honey is from the poplar-tree and white clover. The drought cut our clover crop short.

Now, allow us to ask a few questions. Which is the best mailing queen-cage? Do you send bees by the pound by mail, or by express? When you ship a queen, do you leave the bees with just the wire cloth over them, or wrap the cage up? and when will you have your Bee-keeper's Diary and Account-book ready? We are waiting patiently for one.

T. & C. DUVALL.

Spencerville, Mont. Co., Md., Dec. 10, 1880.

Which is the best queen cage? is just the question I would like to have answered. At present, I feel most favorably toward something like the McCord cage, pictured on p. 445, Sept. No. We may adopt the plan of letting the queens out, embodied in the Peet cage. Friend Martin's remarks in this No. in regard to it, so nearly coincide with my own experience, that I feel anxious to get as many reports as we can, before making cages for another season.—Most assuredly, we can not send a pound of bees by mail. How long do you think the department would allow us even to send queens, should such a thing be attempted?—Cover the wire cloth, by all means. McCord's cage accomplishes this nicely.—The account-book will be out some time this winter.

GRAPE SUGAR.

I am thankful that there is such an article as grape sugar. My bees take it up rapidly out of the barrel as it came from the factory, or in a liquid state out of inverted glass jars, or candy, molded in wooden butter-plates, inverted over the bees on the frames in hives. I have no fear that feeding grape sugar to my bees will injure the sale of my honey.

Du Page, Ills., May 18, 1880. S. ANGLEMIRE.

THE FARIS MACHINE; WHITE WAX FOR STARTERS; GROOVING SECTIONS FOR STARTERS, ETC.

Concerning the Faris fdn. machine: I inclose samples, so that you can see where the trouble is. I can not get perfect impressions on both sides by dipping one plate; but by dipping both plates I can get it right, except that it is a little too thick for starters. I have no trouble with my large plates. I have quite a quantity of this white wax (like the sample inclosed.) Is it not better for starters than the yellow? When one of the plates gives out, will they both have to be put in? if not, how would you do it?

P. S.—I forgot to say, that the sections came all right. I was a little disappointed when I found that you did not go as per order; but when I found that "Parker machine" away down in the middle of one of the boxes, and tried it,—well, I wilted. I suppose you know better what we want than we know ourselves; you did in this case, any how. How much shall I send you for that Parker machine?

LEROY VANKIRK.

Washington, Pa., Dec. 11, 1880.

I think you are succeeding as well as anybody, friend V.; for, if you will recollect, I have never yet decided the Faris machine to be a success all around. There is this to console us, however: although the work does not look just as we would like to have it, it is used by the bees, so far as I can see, just about as well. White wax is not good; it is too hard. This has been fully demonstrated by many experiments. If the yellow is light colored and very thin, it makes so little difference in the appearance of the honey, that it is really no object to have white. When one of the Faris plates gives out, I presume you will have to make a new pair. This is why (or, rather, the constant liability of the machine to give out) I have declined to offer them for sale. However, if each bee-keeper makes his own, and can set to work and fill his machine anew as often as a plate fails, I do not know but that it may do very well. Now a word in regard to nice sheets of fdn. for making these plates. As we have to take unusual care, to get the cells perfect, and have also to take extraordinary care in packing, we shall have to charge, hereafter, double ordinary prices for sheets wanted for making plaster casts.—Many thanks for your P. S., friend V. Once in a great while we have a customer who orders his sections grooved for fdn.; but as we know very well he is making a mistake, and the trouble of grooving them will be more than the cost of a "Parker machine," we have been in the habit of putting them in without charge, as we did yours.

A GOOD REPORT FROM BOX HIVES AND BLACK BEES, ETC.

I started this spring with 56 swarms, all blacks, except 3 that were hybrids, and all in box hives except 4, and those were in such bad shape that there was only one whose frames I could remove. In June, 5 of my swarms proved to be queenless from some cause. Perhaps the cause was old age of queen. I transferred them into Simplicity hives, and had some difficulty in getting them to raise queens and build up, as there came on a honey dearth just at that time, and I had to feed the most of them through July, as I took about all the honey from them when transferred. I have had only 5 natural swarms this season, and one of them went to the woods. I have made one artificial swarm, so that I have 61 good swarms; 10 in Simplicity hives, and 51 in box hives. Those in the Simplicity have not made any surplus honey this year, as three of the natural swarms came in August. Honey all told this year, from new swarms and transferred, would be about 50 lbs. My 51 other hives have done better for me this year than the average, I think. I have taken 5600 lbs. of honey in 2-lb. sections from the 51 swarms. Two swarms in box hives, and black bees, made 250 lbs. of honey apiece in 2-lb. sections. How is that "for high," and black bees and box hives? I have sold almost all of it, and could sell 5 tons here if I had it, at 14 to 15c per lb.; of course, it is not a very large price, but it pays at that.

I shall use the Simplicity hive after this. They are the best style of hive that I ever had, and I have tried a good many different kinds. I have had bees for 23 years, but never paid any attention to them until lately, of any amount. There has always been trouble in getting bees through the winter here, and I was in hopes that somebody would find some plan that would work well without loss. I have always let my bees remain on the summer stands with surplus-honey boxes on, and the last two or three winters they have done well—hardly losing a swarm. They face the south, and are under sheds; and when the sun shines too warmly I put boards up before them, if it was not warm enough for them to get back to the hives. I shall pack them this winter in straw, but shall leave them on the stands.

R. RATHBUN.

Millington, Tuscola Co., Mich., Dec. 8, 1880.

STINGS AND RHEUMATISM.

I saw a notice of stings and rheumatism in your magazine. I have been stung less than 500 times; but before being stung, I suffered from rheumatism in my shoulder, and it has all gone, and I have thanked the bees for it. A bee-sting poisoned me frightfully, and, as a remedy, I find nothing so good to keep down the swelling and allay the inflammation as the brine of mackerel. Rub on quickly and freely. MRS. A. E. JORDAN.

Redding, Ct., Nov. 25, 1880.

LEARNING TO MAKE BARRELS FROM A BOOK, ETC.

I see, in Nov. GLEANINGS, that Mr. Isaac B. Rumford, of Bakersfield, Cal., thinks he might be able to gain sufficient knowledge from books to enable him to make barrels to hold his honey, if there was any work published on the subject of cooperage. I worked at the coopering business nearly forty years, and yet never heard of a book on the subject. The thing is entirely impracticable, any way. I know from experience that the trade can not be learned from books. There have been instances where men have picked up sufficient skill to make what we call slack work,--potato, apple, or salt barrels; but to make a barrel to hold honey requires a first-class workman, and even *then*, about every other one will leak. He had better offer some good cooper an interest in his apiary, and get him to locate with him. I am not saying this, thinking he will make me an offer, for I have quit the trade, and am raising honey. I think Northern Iowa, take it one year with another, will compare with California as a honey country. I have not had what might be called a poor season in the last ten years.

Brush Creek, Iowa, Nov. 9, 1880. B. F. LITTLE.

Now, friend L., I do not want you to say too much against book learning, and making things without learning the trade; for, first you know, somebody will tell us of having made barrels that will hold honey, without being any cooper at all. I know it requires skill to make a barrel that won't leak without waxing, for I have had some trials with leaky barrels.

A BEGINNER'S TROUBLES, ETC. POLLEN-GATHERING IN NOVEMBER, ETC.

I have just stepped into the A B C class at the foot. There is no one below me, and of course I wish to make some advance. Toward the latter part of last September I received a hive of bees from A. W. Cheney, Orange, Mass., said to be Italians, and I presume they are. I think I can see three yellow bands, and that is all I know about it. I took the hive to pieces, according to his directions, which was no small job, every thing being spiked together with 12d nails, wherever there was a place to drive one in. I noticed that the combs were not very full, and one or two had no honey at all, and I thought they would likely be short of stores before spring; and, as you gave directions for feeding coffee A sugar syrup, I sent to you last month and got two feeders, and have given them about 12 lbs. The bees will carry in a pint in an hour. I selected the warm pleasant days to feed them in. Since I began, they have appeared more lively; and when I go about the hive they come around me and seem to say, "I would like some more of that nice syrup you gave us the other day." Now, right here I am brought to a stand. On page 535, Nov. No. of GLEANINGS, you say, in answer to a correspondent, that there is danger in feeding liquid food to a weak colony. I had not noticed that you had intimated anywhere in your directions that you have given that sugar syrup is dangerous; and I am not capable of judging whether you would call my colony weak. I shall not feed any more until I hear or see something in next number of GLEANINGS. To-day has been mild and pleasant, and at noon, when I went to dinner, of course I went out to see the bees. There were a great many coming home to the hive with loads of pollen; and Mrs. J. watched them some time after I went away to work, and she said that some had very large loads of deep orange color, and some others had different shades of yellow, and others had large loads that had the color of light beeswax. Where could they get it? and why did they want it now? I do not believe this is much of a honey country, but I am going to see if I can get a little. DANIEL H. JOHNSON.

Danielsonville, Ct., Nov. 9, 1880.

The pollen is all right, you are all right, the feed is all right, and the bees are all right, if I mistake not, friend J. Yes, and your wife is all right too, in taking the responsibility of watching and interesting herself in the bees when you are away. If I am correct, you fed it to them a little at a time, much in the way natural stores come in, and this can not very well do harm. Your colony is a pretty good one, I should think, from the account you give, and I guess friend C. was about right. It is much better to make a package of bees too strong than have it break to pieces and become a wreck on the way.

SILVER-DRIP SYRUP FOR BEES, ETC.

Please send me your price list. I don't know yet that I want any supplies for next season, but I must have something to read these long evenings. I have read the back numbers of GLEANINGS over and over; but too much of a good thing will sour on one's stomach, like the 12 gallons of silver-drip syrup my bees were on May-day. Last year I fed them on yellow coffee sugar. I had to be content last spring in seeing my bees carrying the granulated sugar out of the hive. I think ⅛ of the sugar was lost in this way. If the silver-drip syrup does not granulate nor give bees the dysentery, I think it the next best thing to honey. I thin the syrup and fill a frame, and hang it behind the division-board. This I shall do in Sept. instead of Nov., as I have done this year. Get a few prickly ash for your honey farm, and report next fall. No. of stands, 27; in good condition, 10. If next year does not "pan out" better than the last three, look out and enlarge the Blasted Hopes department. LOUIS HOFSTATTER.

Louisville, Ky., Nov. 24, 1880.

Please report, friend H., in regard to how the syrup answers; and tell us, too, what it costs. I have never yet found a fine white syrup, like that made from granulated or coffee sugar, for instance, that could be bought as cheaply as we can buy the sugar and make it. If they have a pure syrup that won't granulate, it may be a good thing; but how do you know this syrup is not made from grape sugar? If such is the case, you can make it yourself, and save money, by the directions I give you in our catalogue.

MARKING OF HYBRIDS, ETC.

As I have seen so much about the test of Italian bees, I would like to give my experience. We bought two colonies of Italian bees three years ago last spring. The next spring we had four; and, although there were no other bees within two or three miles of them, there were a good many jet-black bees among the new swarms. As we supposed that hybrids would have one or two bands, we were a little puzzled. I wrote you about it, but got nothing satisfactory in reply. Increased to eight swarms the next season. Some swarms were almost entirely black—jet-black—blacker than any black bees I ever saw, with now and then nice three-banded bees among them. Some were mostly yellow bees, with but a few black ones; others were plain three-banded, with a jet-black tip; and, bear in mind, the pure black, and yellow and black ones have no downy rings at all. I don't know any thing about one or two banded bees; I do not find them; but, for robbing, these bees are A No. 1. Unless honey is quite plenty, they are on hand with their bills whenever or wherever a hive is opened. Now, when I have a young queen begin to lay, I watch and examine when the brood begins to hatch; and if the bees are all yellow, I call her pure; and if I see one or two of the little fellows that have just crawled out of the cells, that do not show any yellow at all, I pronounce her hybrid. We bought an imported queen of you a year ago last spring, and another last summer. Their progeny, I notice, have the rings of down as well as the yellow bands. As I have never heard nor read about hybrids being black, and as I have had no opportunity to see any other hybrids than my own, I would like to know if they are always so, or if ours are an exception. **MRS. P. P. COBB.**

Middleville, Barry Co., Mich., Nov. 8, 1880.

The explanation is, my friend, that hybrids are so very diverse in their markings. In some cases, the bees will nearly all take after their male parent, to such an extent that a yellow queen may produce bees almost entirely black. In the same way, a pure-black queen (mated with an Italian drone, of course), may produce very finely marked Italians, or, at least, the greater part of them. By noticing a great number of hybrid stocks, you will see how unlike they are in markings. One queen will produce, uniformly, two-banded bees; another, all kinds of bees, from one band up to three, and some bees entirely black; or, as you say, blacker than any common bees. This same law of mixed races is seen in fowls and all kinds of animal life, and even in the human family. Nature always "sports" more or less in shades of color; but where there is a cross of two races, then she seems to delight in cutting up all kinds of pranks and unexpected antics, if I may be allowed to so express it.

DO WE WANT BROOD LATE IN THE FALL?

The question is, "Is it or is it not, a desirable thing that queens should continue laying until very late in the fall?" When preparing colonies for winter, it will always be found that some of them have more brood than others, and generally less honey; while others are in the opposite condition. As to just which condition is the best at that time of the year, there seems to be considerable to be said on both sides. Is not this late breeding unseasonable? and is it not an expenditure of mature bees and of winter stores which is not compensated for by a corresponding increase of young bees? or will the young bees produced at this time be an element of strength which will be needed during the winter and early spring which is so soon to come? If breeding is extended into cold weather, will not the central cells be occupied with brood to such an extent that there will not be room for winter provision? and will not winter, when it comes, find the colony unprepared for winter? Is it best, or is it not best, that bees should stop breeding as soon as the yield of honey ceases? This question is practical and important, and seems to be one which should be taken into consideration when making selections for breeding stock. **A. B. WEED.**

Detroit, Mich., Nov. 5, 1880.

I presume there will be a diversity of opinion in the matter, friend W.; but as for myself, give me the bees and queens that will raise brood at any or at all times of the year. I will take care of the supplies and the young bees. Now let us hear from others.

BEE TALK; LAZY BEES.

Now, friend Novice, does it not disturb your quiet repose somewhat, to even contemplate such a subject? That part of animated nature, the honey-bee, that upon so many well-fought battle-fields has justly earned the title of "busy bee," and now, at this late date, to apply the epithet *lazy bees*, is more than *I* can stand. I will give you one volley of experience on this subject, and then leave it for those who are interested to ponder over, before abusing our God-given pets by calling them lazy.

I had a colony of nice Italians last spring that was strong in bees; and when other colonies were storing honey, this colony was not gathering enough stores to keep up the consumption in the hive. Here, now, said I, is one of these lazy colonies that I have been reading about in GLEANINGS. I decided, in my own mind, that I would not keep any queen that would produce such workers, and so I opened the hive with the intention of cutting off her head and giving them another queen; but when I got a glimpse of the inside of their home I changed my mind very quickly; for I could see clearly, or, at least, to my satisfaction, where all the trouble was. The queen that I had condemned to be executed had that hive filled from shore to shore with brood, and it took so many bees to hover and nurse the young brood that field laborers were scarce. What was to be done? Well, here is just what I did: instead of killing that large and beautiful queen, I took away two combs of brood, and hung combs containing honey and pollen in their places. I then picked out two more combs of hatching brood, and hung them on the outside of brood-chamber; by this process I soon crowded the queen on to five or six combs instead of ten, and had the satisfaction of seeing, in a short time, as good a working colony as I had in the apiary.

Bloomdale, O., Nov. 10, '80. **R. B. ROBBINS.**

Very good, friend R. It is true, we should go slowly in condemning any queen to decapitation; but what are you going to do with the statements from this next brother? Read :—

REPORT OF HONEY CROP OF 1880.

Bees have done so little in this section of country, that it is almost impossible to find any one besides myself who got any surplus honey from their bees.

I wintered 49 colonies that came through nice and strong. I got all my surplus of 10 hives (8 Italians and 2 blacks), and 2 swarms of Italians and 1 black. I got 100 lbs. of nice 1½ lb. section honey from one stand, and all my bees received the same treatment, so that I am convinced there is as much difference in bees as there is between day and night as to their working qualities. The queen in the hive that yielded so much honey is the daughter of a queen raised from an imported mother. I claim that, by careful selection, we can now pick out just as good queens as those that are imported, if not better. I intend to raise all my queens this next spring from these hives,—the one that made so much honey, and from the mother of the queen, which will be 3 years old in the spring. The surplus amount of ten colonies was 250 lbs. I had to feed 10 old stands and 2 young swarms, which took about 200 lbs. of sugar. I have now 53 colonies in wintering condition.

Greenfield, O., Nov. 30, 1880. J. C. POMMERT.

PEET CAGE.

I would say in relation to the Peet cage, that I have used several of them during the past summer, and can indorse *nearly* all that is said of them. For all purposes, there isn't a better cage in the market; and the only failure I made with them was in introducing queens according to directions. I introduced several safely by applying the cage to an even frame of brood and removing the slide; but after losing two fine queens by the bees digging under the edge of the cage, I was in a stew about all the rest. I prefer to hang the cage between the combs, and not remove the slide until the proper time. That proper time is the third day. I have introduced over forty queens during the fall, losing not one. J. H. MARTIN.

Hartford, N. Y., Dec. 2, 1880.

The above objection is the one I feared in regard to the Peet cage, and that this one thing would cause disappointment. As yours, friend M., is the only case of failure we have had reported, I think we shall have to conclude the danger is not a very great one, even in the hands of inexperienced persons. With a valuable queen, say an imported one, I would by all means adopt the plan you mention, of letting the queen out myself, rather than to trust to the bees to do it. Of course, if we do this we can not let her out on the brood.

SEED FARMS AS HONEY FARMS.

(See p. 379, Aug. No., 1880.)

As you wished to hear more from my bees, situated next to D. M. Ferry's seed garden, I thought I would give you their work now, while it is fresh in my memory. Of course, I keep an account of receipts and expenses; but still there are other things we don't set down, and consequently they are forgotten. I commenced there with 4 swarms of what I supposed to be Italians, 2 of the queens from your yard, and 2 from Alley's. The two from your yard were both hybrids; but those from Alley were just splendid. I had some queens of Alley this summer, but not so nice. During this summer we had 14 natural swarms from the four; have doubled up until there are now 15 in all, all of which are strong and rather too full of honey. We also got considerable surplus. We have not weighed it yet, but think there is over 100 lbs. This is the bright side I have given; now for the dark side.

I visited the yard about two weeks ago, which, by the way, is ten miles from here, and found a number of the swarms have the dysentery already—one of them very badly; thousands of bees were lying around, and their nicely painted chaff hive was all besmeared. I think it is the honey that affects them. There is lots of white clover in their vicinity, but they seemed to gather none, preferring the honey from the onions, etc. It has a peculiar taste to me, not very agreeable; others, not so used to eating honey, don't notice it so much. I will let you know in the spring how they come out.

My bees at home have done very well considering the season. My best swarm gave me 111 one-pound sections; another 98, and so on down to nothing. All my bees are in chaff hives, well painted in two colors. I took some honey, hives, sections, fdn., smokers, bee journals, etc., to our county fair; had much the same experience that friend Hutchinson did. I was awarded the first premium on honey, but, through some mistake, I got nothing for it. I received first premium on hives, which they paid; some one stole my September GLEANINGS, which leaves my number for the year incomplete.

M. H. HUNT.

Bell Branch, Wayne Co., Mich., Dec. 4, 1880.

REPORT FROM AN ILLINOIS BEE KEEPER.

I have never made a report since I have been in the bee business, for the reason I knew just where my report belonged. But I will make one now at a venture. I went into winter-quarters last fall with 55 colonies; wintered on summer stands, partially supplied with chaff division-boards, with a cheap box set on top, filled with chaff. Came through with 54; had no spring dwindling. I united none in the fall nor in the spring, for the reason I wanted increase as well as honey. In our locality, I don't think feeding in the fall, to stimulate breeding, pays. Neither do I think spring feeding is necessary, unless it is for increase. If our bees get strong by the first of July that is all we want. August and September is our honey harvest. June is the time to feed. We get no honey from linden nor white clover. I raised about 90 queens; sold $40.00 worth, used the balance myself. Proceeds and sales are as follows:—

Queens	$ 40.00
Section honey, 1370 lbs. at 16	219.20
Extracted honey, 330 lbs. at 10	33.00
Increase, 30 colonies, worth $5.00 each	150.00
Total,	442.20
Less incidental expenses,	39.00
Net proceeds,	$403.20

RUFUS ROBINSON.

Laclede, Fayette Co., Ill., Nov. 29, 1880.

HOW "DOWN-EAST" A B C SCHOLARS GET A START.

I thought perhaps you would like to hear from one of you eastern A B C scholars. I commenced last spring with one hive of bees. They gave a good swarm in June. I put them in a box hive, having no other. I got a swarm of bees that were in a box hive of a neighbor, and a friend showed me how to transfer them. I got a large swarm late in the fall that were on the underside of a limb of a large tree, 43 feet high. They had seven combs. In November I took another swarm having 9 combs, from a projection under the eaves of a house. The day was so cold that I transferred them in the parlor. I now have four hives—three in 1½ story, and one in a box hive made in the good old way, with handsaw and plane. Nearly every one here keeps their bees in box hives. E. H. COOK.

Andover, Ct., Dec. 6, 1880.

ALMOST "BLASTED HOPES."

I reckon I am in Blasted Hopes, but still I will try to get out. Three years ago I bought 11 stands of bees, and 13 since, in chaff hives. I have 27 now all in chaff hives. One has frozen to death already this winter, and I fear that very few bees will be left alive till spring, because brood-rearing stopped earlier than common, and the bees are too old to stand a severe winter. We got no honey here in Clark Co. this year, and our greatest bee man here (O. Olson) has gone to Florida to try it there. Bees here are mostly hybrids and Italians. They have not done nearly as well since the introduction of the royal blood as before. They are death to the miller, but I don't believe that, after a few years, they are nearly as hardy or prolific as the common black bee, nor are they any better honey-gatherers.

JOSEPH GARST.

Springfield, Ohio, Dec. 10, 1880.

CELEBRATING THE FOURTH OF JULY.

I celebrated last Fourth of July (or, rather, the 5th, as the 4th fell on Sunday) by purchasing, in Rockland Co., N. Y., my first swarm of bees. They were black bees, in an "American" hive. Don't you think that was a good way to celebrate the Fourth? Some time in August I discovered they had no queen. I at once purchased a tested Italian queen of Messrs. A. J. King & Co., and now I have a colony of beautiful Italians that plainly show *all* the three bands. It is a rather weak stock, however, and I have been obliged to feed some. About a week ago I bought a box hive of blacks, but it is too late to transfer them this fall. The Italians are in a small empty room in second story of house, east side. The blacks are outdoors—protected, however. I hope to have some good results to show next fall.

SAMUEL A. MILLER.

Bloomfield, Essex Co., N. J., Dec. 1, 1880.

I think it a first-rate way to celebrate the Fourth, friend M.; but I am afraid if you have put your Italians in a room, as a good many of the A B C class do, you have, by your mistaken kindness, defeated any chance of celebrating the Fourth in 1881, with that colony of bees. The trouble is, with any room above ground, that you can not well make it perfectly dark; and as soon as a warm day comes, the bees will get out in the room, and never get back again. And even if you should make it perfectly dark, which I hardly ever knew a green hand to do, you would give the bees a colder place to live in than outdoors, because they could not have the benefit of any sunshine. Leave the bees outdoors, on their summer stands, unless you can put them in a warm, dry, dark cellar; and never, under any circumstances, put them in a room above ground, unless it has all the conditions of a cellar, or allows the bees to go out through the wall, as in the house apiary.

HARDENING PLASTER PLATES, ETC.

In Colby's communication, page 444, your answer is incorrect. I was glad to see Doolittle's answers on page 571, and I think I know why he lost his bees; they didn't go into winter-quarters with enough young bees; had been queenless in the fall, or else frames of brood had been removed to strengthen other hives. I never lose a full hive, even if not prepared for winter, except from want of stores; and I have wintered, without a single loss, a two-frame nucleus, but I never failed to have plenty of young bees in them. I always winter outdoors.

Oxford, Pa., Dec. 6, 1880. S. W. MORRISON, M. D.

My answer referred to, which friend M. says was incorrect, was that I feared adding alum to the water in which plaster was dissolved, for making Faris plates, would not prevent water from dissolving them. It is possible that the alum enters into a chemical combination so as to become insoluble, and I shall be very glad to know that I was wrong. Who can report from experience? I presume a great many can tell friend D. why they think his bees died; but we have very few among us who have not been compelled, sooner or later, to own up that the bees died, sometimes, when they did not know the reason why.

GETTING QUEEN-CELLS FOR QUEEN-REARING.

I was interested in reading the articles by Messrs. Townsend and Brooks, pp. 322, 362, Volume VIII., GLEANINGS, in regard to obtaining queen-cells, as I had been experimenting in the same direction; *viz.*, placing the strips of brood so that the base occupies a horizontal instead of vertical position. I have obtained the best results by cutting the brood-comb into strips containing but one row of perfect cells, and fastening these to the ordinary thin comb-guides, two or three of which are then tacked to the empty frames horizontally, and so that the queen-cells will be built within the frame.

The principal advantages of this method are economy in the use of brood, and of time in preparing it for the cell-building colony; also, where the queen-cells are finished they can be easily separated with a sharp knife, leaving each one attached to a short piece of wood in the nicest shape for use in the nucleus or nursery. For some reason which I do not understand, the bees will build more and better cells if the comb is placed on the strips of wood in such a manner that the base will be below the lower edge of the strip. To fasten the comb, I prefer to pour the melted wax on the wood and lay the comb in it.

I think better queens are obtained by doing the "stealing" of condemned larvæ when they are three days old, and by removing them from about two-thirds of the queen-cells started.

E. M. HAYHURST.

Kansas City, Mo., Dec. 8, 1880.

Thanks, friend H. If I get the idea, the comb-guides are tacked to the side-bars of the frame; the strip of larvæ is then pretty nearly in the usual position of a comb, when fastened with melted wax against these strips; and that the bees may have full play in working all around their queen-cells, the strip of brood should be slipped down on the comb-guide pretty well. The cells with their opening uppermost will suffice to hold the inverted ones securely; then, after having them start a great many from young, 3-days-old larvæ, a part of them are torn down, that they may concentrate their efforts on only a few, and have these few strong and healthy.

BLACK BEES IN ITALY.

I see that friend Jones says there are black bees in Italy. I had come to that conclusion myself. Having bought quite a number of dollar queens of friend Ila Michener, that he reared from the select imported queen he got of you, I was surprised to find so many produced what I call hybrids. Friend Ila came to show me they were not hybrids, by placing them on the window, where he said they showed the bands plainly enough (dirty-looking bands they were, though.) Now, the bees produced from that imported queen look just the same, and are cross. Why! if it were possible, I would think she had flown half way across the Mediterranean, and mated a drone from the African coast. I left my bees until now for chaff packing; and, cold as it is, they will boil out on the snow whenever the hive is touched. If friend Jones' Cyprian and Holy-Land bees beat that, I don't want any of them. For gentleness, beauty, prolificness, and honey-gathering, I like the albinos; for, although they may not gather quite as much honey, one can work among them with so much comfort that bee-culture is pleasure if not profit.

ANSON MINOR.

Low Banks, Ont., Can., Oct. 25, 1880.

You have got it exactly, friend M. The bands are sometimes dingy and brown; but they are there, plainly enough, when you look for them right. Very likely, the progeny of one queen will be much crosser than another, for this is the case with all races of bees, if I am correct; but I would prefer the bees that make the honey, even if they are cross, I think.

DYSENTERY IN DECEMBER.

My bees are all dying. I have lost five swarms out of eight; two swarms died in the latter part of Oct., and the other three in Nov. They had a full supply of honey—a sufficient amount to have fed them through the winter. Those that have died are the black bees. I have one swarm of Italians, which seem to be strong and vigorous. My neighbors' bees are all dead. The honey looks well, and is free from moth or any infectious trouble. What is the matter? and what is the remedy, if any? JAMES DODD.

Clear Creek, Ind., Dec. 4, 1880.

I do not know what is the trouble, friend D., unless it is the extremely cold spell of weather we have just had, with bad stores, or, rather, unwholesome honey, and perhaps insufficient protection. Neighbor H. has just been in, and reports that his bees are spotting the hives the worst of any thing he ever saw or heard of. He has never lost in wintering, you may remember, and was feeling quite confident of his ability to carry bees through safely, any winter. His bees are down by the river, and they filled their hives nicely on fall flowers, while we were obliged to feed sugar to get ours into wintering trim. Well, ours have scarcely spotted the hives at all, and are in excellent condition. Some, in both apiaries, are yet in the Simplicity hives, where we had queens we were intending to take out. He has lost 6 colonies outright, by this aggravated dysentery, while ours, in the Simplicity hives, are bright and healthy. I attribute the difference solely to the stores. Ours, you may remember, were fed up on candy made of granulated sugar, and A grape sugar. His in the Simplicity hives were much worse affected than those in the chaff hives. This seems to indicate that chaff hives will do a great deal toward making poor stores wholesome; but that pure sugar is much safer, as a general thing, than natural stores.

GALVANIZED IRON FOR HONEY UTENSILS, ETC.

In answer to I. B. Rumford, p. 545, Nov. No., I will say, that I have used galvanized-iron tanks for honey for the last 10 years, and the tanks were as clean and bright the last day as the first. If honey acts on the galvanizing, it must be a very slow process, as I have not been able to detect it during that time. You may also inform your readers, that beeswax makes a cheaper, easier, and almost as good lining as tin for home-made wooden extractors, boxes to carry combs, uncapping-box, and other utensils that can be washed with tepid water. I made this year an extractor, all thoroughly seasoned wood except the wire cloth, honey-gate, screws, and nails, and coated it inside with melted wax. I put a cork or plug in the gate *from the inside*, while coating it. I made also two tanks of 55-gallon whisky-barrels, holding 600 lbs. each, and they cost me $2.50 apiece. They have honey-gates near the bottom. The heads were knocked out, and the barrels coated inside with wax. WM. MUTH-RASMUSSEN.

Independence, Inyo Co., Cal., Nov. 16, 1880.

Galvanized iron keeps bright, friend M., just because it is all the time being slowly dissolved by the liquids it contains, or that fall on it. Even pure water will thus dissolve it. It is not positively dangerous for most kinds of food, unless they stand a considerable time in it, in small quantities. If you let a thin stratum of honey remain several days on galvanized iron, you can readily taste the salt that is formed with it and the honey; and if the quantity be sufficient, you will experience the bad effects of a mineral poison. It has been almost entirely discarded on this account.—Waxing barrels and other utensils has been very fully discussed in our back volumes and the A B C. There is no objection to its use, except a slight stickiness and the inconvenience of not being able to scald such utensils as we can tin.

WHAT 1 LB. OF BEES IN JUNE DID.

My bees did well this year. They made me 800 lbs. of box honey, 50 hives. I feel well pleased with that pound of bees I got of you. I put them in their hive the 20th of June, and they filled it. On the 15th of August they swarmed, making me 2 good swarms of Italians. Can you beat that from 1 lb. of bees from June 20th? L. S. SOULES.

North Lacrosse, Wis., Nov. 30, 1880.

AN A B C SCHOLAR'S FIRST SUMMER WITH BEES.

Good morning, friend Root! I will try to write a few lines about my first summer in handling bees. I commenced with 5 stands of bees in the spring of 1880. I bought chaff hives of friend Good, and hired him to transfer them from common box hives into the chaff hives. May 22d I bought 4 Italian queens of friend Good, and introduced them successfully. June 1st I divided 5 stands and made 10 of them. June 2nd, I bought 5 queen-cells of Good, and had bad luck with them. One was dead in the cell; one came out missing; two were lost, I suppose in their wedding trip; the other is a very prolific queen, and breeds very nice, gentle, three-banded workers. I have increased those 5 stands to 27, and taken two late swarms from box hives that were to be killed. I united them together, and they are doing well. I took two from the woods rather late in the fall, and they are doing tolerably well. I bought 10 other stands in box hives; transferred all of them into chaff hives, and these are doing pretty well. Six of the ten have not stores enough to winter; but I am feeding them. I will not let them starve, if grape and coffee A sugar will keep them. I have now 30 stands, all packed in chaff, mostly in good order. The Cyprian queen that I bought of friend Jones, of Canada, is doing well. She is very prolific. Her bees are nice, handsome, and gentle as any pets can be. I did not get much honey this summer. It was a poor honey season. I got about 70 lbs. of honey. I have been working for bees more than for honey. I intend to raise honey-plants of different kinds. I am offering buckwheat to my neighbors, free of charge, if they will sow it. I will sow 5 acres myself. Wishing all my brother bee-keepers good success, I feel very well satisfied with my bees. I think they have done all that was in their power.

PHILIP MORNINGSTAR.

Wakarusa, Elkhart Co., Ind., Nov. 22, 1880.

BRIEF REPORT.

I have been at bee-keeping on a small scale in this county four years. I had three good seasons out of four. The third year was a season of drought. Out of 60 stands in spring, 14 weak ones remained at the end of a year. These 14 I increased to 42 (I used old comb), and gave about 1800 lbs. extracted honey; all sold at an average of 11c per lb.

A. HUMMEL.

Webb City, Mo.

A BAD REPORT FROM SUGAR-FEEDING, APPARENTLY.

I have inclosed one dollar for GLEANINGS for another year, but I think you will have me in Blasted Hopes long before the year is up, for my bees are dying so fast I am afraid they will soon be all gone. I did not get a teaspoonful of honey out of 5 hives, and no swarm at all. I gave one last year's swarm about 18 lbs. of the best sugar I could get, and they are dying faster than any of them. Now, I do not want to be put in the Growlery, but the Simpson seed you sent me did not grow. I got only two plants, and I am not sure but they are weeds. The Spider plant did well. The bees worked a good deal on it.

ISAAC STAPLES.

Dayton, O., Dec. 4, 1880.

It may be that the sugar is not a preventive of their dying in winter, friend S.; but there are two points you have not made very clear. At what time did you feed this colony 18 lbs. of sugar? If it was early in the season, they may have consumed it all, and may be now on fall stores. You say you got the best sugar you could find. Was it as good as coffee A? Granulated sugar is quite a little purer still, and friend Jones insists that it is by far the most healthful. We are very sorry to hear of your poor success.

WIRE CLOTH OVER THE BEES FOR WINTER.

Has the experiment ever been tried, that you know of, of substituting wire cloth for the mat over the frames of bee-hives in winter, and then filling the upper story with well-sifted chaff? I have thought of this since putting my bees into their winter-quarters, or I would have tried it. It seems to me that the moisture, which is always found on the enameled cloth especially, would be absorbed by the chaff, and that dryness in the hive secured, which seems to be regarded as of importance in successful wintering.

JAMES MCNEILL.

Hudson, N. Y., Dec. 7, 1880.

The idea is an old one, friend M., as you will see from back volumes. I used it for one winter, and liked it well, only that it was a good deal of trouble to open a hive, and was, besides, pretty expensive. A good many of these wire-cloth mats were sold, tin lined. You see, you have got to remove all the chaff every time you open the hive, or else have the wire cloth form the bottom of a sort of box, as it were. If you do the latter, you will kill bees when you set the box back, as you would not do with any soft or yielding material, like the enameled cloth or burlap. Besides, the bees will, at the first opportunity, wax over the meshes of the wire cloth, and then you have virtually an oil cloth, or something a little harder, after all. Wire cloth has also been frequently suggested for the inside of chaff hives; but it would be more expensive than wood, and, after it is waxed over, probably not as good as the wood, after all.

CLARIFYING EARLY-AMBER SYRUP WITH CLAY.

The following is from *The Indiana Farmer*, and should have been given some time ago. The "clay" idea has been mentioned before in our columns.

Those who have raised the early varieties of cane are now working it up, and the reports that reach us of the yield and quality of syrup, are very favorable. The strong sunshine and high temperature of July and August secured this result. We have reports from several manufacturers who are using the clay (the light-colored clay is preferred), and as the juice runs from the mill it is transferred to a proper tank, and a half-bushel of clay is mixed with 100 gallons of the juice, and briskly stirred until the mixture is thorough. It is then suffered to stand quiet till the clay settles to the bottom, when the juice will be found to be as clear as spring water, the clay having carried the gum and green coloring matter with it in settling—thus freeing the syrup from the peculiar sorghum taste. The juice is carefully drawn off from the sediment and rapidly evaporated to the proper consistency. If the cane is well ripened, litmus paper will show little or no acid; a pound or two of powdered chalk may be mixed with each half-bushel of clay. It is claimed for this process that it not only makes a better syrup, but that it effects a great saving of labor in heating, skimming, etc. The chief objection is that it exposes the juice so long before boiling that the sugar is chiefly converted into glucose. This can be prevented, to a great extent, by the use of four ounces of sulphite of soda to 100 gallons of fresh juice. Try clay.

WIRE CLOTH FOR QUEEN-CAGES.

Don't use painted wire cloth on queen-cages. Jolting about in the mails, the paint gets crumbled off, and drops on the candy within. Last season I received by mail two queens, and I could see a great many particles of paint on the candy. Is it not probable that the bees, in licking the surface of the candy, will eat some of the smallest particles of paint, and in feeding the queen impart the poison to her?

G. H. POND.

Bloomington, Minn., Dec. 7, 1880.

This matter has been several times suggested, but I have never known bees injured by the painted cloth we have kept in stock. A neighbor mentioned having had bees and queen all killed by using a wire cloth that was supposed to have contained Paris green. If I am correct, they warmed the cages over the stove for some purpose, and the fumes from the Paris green permeated the wood and candy, so as to kill every bee that was tried, very soon after being put into the cages. We have discontinued the tinned wire cloth, because it is too bright for the eyes in trying to see the bees through the meshes. The best thing we have found is the blued wire cloth. This is so dark, the meshes so large, and the wire so fine, that we can see the bees almost as well as if nothing intervened at all, to cut off the view. This is the same wire cloth as that used for the blued-wire dish-covers. At present, it can not well be obtained at less than about 5c per square foot, while the painted is only 3½c per square foot.

NUMBER OF STOCKS THAT CAN BE KEPT PROFITABLY IN ONE LOCALITY.

I have about 60 swarms of bees, mostly Italians, and I have them scattered in 4 places, and desire to know how many are profitable to keep in one place, and how many will thrive in the area of their flight. It has been not much more than starve the past season in this part of our State. The Italians have proved their superiority as honey-gatherers in most instances, but the honey harvest is quite small.

AMBER CANE.

Just at this time there is quite an excitement upon the subject of raising Amber cane for sugar and syrup. Some persons have experimented quite largely, and produced a very nice article. Now, I desire to ask, through GLEANINGS (if any of your contributors have experience), how an apiary would flourish near a mill where this cane is ground and made into syrup, or how a sugar manufactory and apiary would be likely to work in proximity to each other. An answer through GLEANINGS would be gladly received. How would this syrup answer to feed bees? This Amber cane is not the old sorghum, but seems much superior in every respect.

"FAIR" TREATMENT.

We obtained the first premium on our honey at the Bradford Co. fair, probably one of the largest fairs ever held in this part of the State.

BELA COGSWELL.

Silvara, Bradford Co., Pa., Nov. 22, 1880.

Locations differ; but, on an average, it is found that about 100 are as many as it is well to keep in one place, where honey is the object. If one is rearing queens, he may keep as many as three, four, or even 500, in one apiary; but, of course, he will have to feed more than if they were scattered more widely. If it were not for the advantage of having all your bees right under your eye and hand, I presume more honey would be obtained by scattering them in apiaries of not over 50 each, and as much as four or five miles apart.—Early-Amber sugar-cane has been pretty fully discussed and reported on in our last year's volume. At times, the bees trouble the sorghum mills, and at other times they do not. I believe no trouble has been experienced where proper precautions have been taken to keep the bees out of the syrup when they were not getting stores from other sources. If a nice article, it is as safe for feeding bees as cane sugar.

IS IT AN ADVANTAGE TO INTRODUCE ITALIANS AMONG BLACKS, PAYING THEM NO ATTENTION?

Do you think it a good plan to add a few stands of Italians to the apiary, all the others being blacks? Will the blacks, in a short time, run the Italians out into the common kind? G. G. KENYON.

Central Square, Oswego Co., N. Y., Dec. 15, 1880.

I should consider any admixture of the Italian blood an advantage, and I do not think the Italian blood would be apt to run out, from the fact that almost all the bees in the forest are now getting to be more or less Italianized; and some of the prettiest marked Italians I have ever found have come from bee-trees in the woods. Unless you take pains to rear queens, or get queen-cells from your Italian stocks, the work of Italianizing would go on slowly; and if the blacks greatly outnumbered the Italians, and all were left to swarm naturally, the Italian blood might run out entirely. Inasmuch, however, as Italians often gather enough to survive the winter where blacks would starve, the chances are greatly in favor of the Italians running out the blacks, in the course of time.

PREPARED PAPER FOR THE BASE OF COMB FOUNDATION.

As there is a lull in business just at the *present moment* (although I am liable at any moment to be called on to show dress goods, weigh out groceries, fit a pair of stoga boots to a customer, or wait on the post-office), I thought I would drop you a few lines in regard to your observations on paper separators, and paper as base for comb foundation. The bees cluster in boxes more readily, we think, with paper than tin separators; and our experience is, they do not attach wax to the paper as much as to tin. Our prepared paper does not absorb *any* of the wax as does a wood base; and, as the paper forms the base, *almost all* of the wax is placed in sides or contour of cells, thus saving the bees much labor. It will not sag nor crack while extracting; and if I succeed in making it a success, I think it will be the "boss" for shipment.

Bees are *very quiet*, with fair prospect of a long winter. J. E. MOORE.

Byron, N. Y., Dec. 13, 1880.

Be not weary in well doing, friend M. The trouble is not with paper and wood for fdn., that they absorb the wax, but that the bees are obliged to pile up wax on them, as it were, to get the proper shape for the base of the cell. This same objection holds good for any material that leaves a flat base to the cell. If you will weigh a piece of finished comb with a paper or wood base, and compare it with the natural-wax base, you will see the amount of wax that is wasted; or take such a comb and scrape the cells off, and then you will find the ridges of wax that have been saved by a convex and concave wax base. Wood and paper bases are a success, without doubt, only in this one particular: they are awfully expensive, when we consider the wax that is used by the bees in making them.

I write you in regard to Alsike clover. Is it a clover that will stand pasturing with cattle and sheep, and is it as good as our common red clover? I want to seed 60 acres in the spring with clover for pasturing purposes. I have had considerable experience with the common; can't say it is very good, especially if it is too dry. **Lee Warner.**

Allison, Ill., Dec. 8, 1880.

Here is an answer to the above by "Neighbor H.":—

If your land is a rich, black, damp, or sandy soil, I know of nothing that will produce more pasture than Alsike clover. I think it would thrive on the prairies of the west (will some one report?) I would not recommend it for a dry clay soil, though it is said to grow luxuriantly on the Green Mountains of Vermont. If you are seeding for pasture alone, I would mix the common white clover, about one-sixth part white, with the Alsike, and you will have bee pasture, or any other kind that will suit.

BEES THAT WON'T ACCEPT A QUEEN.

During the past summer I endeavored to introduce a queen to a hybrid colony of bees. I followed instructions in A B C; released her every 48 hours for 22 days, before the bees would permit her freedom. She commenced laying in a few days. In 6 days thereafter, the bees commenced building queen-cells; as soon as they were capped over, I destroyed them. In a short time they repeated the operation; I again destroyed the cells, but they were determined to outwit me, and so I repeated these operations. I then let them have their way. In due time the cells were capped, and within 4 days after capping the cells they killed the queen. The queen was a nice one, and a good layer. Do bees act in this way often? If so, how can we tell when we have a queen introduced? **Wm. Parmalee.**

Bean Blossom, Ind., Dec. 8, 1880.

This was one of the kind of stocks I mention in our directions, that won't accept a queen at all. I have estimated that we find such a colony about one time in a hundred. You did the very best you could, I believe, unless it was to have kept on destroying the cells until your queen had some bees of her own hatched, and then she would have been safe. When we meet a colony of bees like this, all attempts to introduce a queen by letting the bees liberate them themselves, would be throwing queens away; and this is why I can not think it well to advise any style of cage embracing such a plan.

ADAMS' HORSE-POWER; HOME-MADE ONES, ETC.

I see a good deal about the Adams horse-power (see p. 393, Dec. No., 1878, and Jan. and Feb. Nos., 1880), that it won't work. I made me one last January, and I have used it ever since. I am not much of a carpenter, but I built that myself. I run a lathe with it; the wheel is 14 ft. in diameter, which is rather small, but does well, as I have proved by running it nearly every day since starting, and I make saw-arbors cheaper than the most of your readers. I make mine of wood, by screwing a piece of wood to the arbor of the lathe, and put a saw on that, not using the tail of the lathe at all. I don't get much room from the lathe head, but make my hives on it very well. **H. L. B.**

Palenville, Greene Co., N. Y., Dec. 14, 1880.

FEEDING NEW SWARMS, ETC.

My bees, 3 hives in number, I commenced dividing the 15th of May. I divided till I got four, and then they began to swarm; the third swarm went to the woods, I suppose because they had nothing to store on. I cut the tree, and got them back home the next day. I fed them for eight days on melted sugar, and the eighth day they had their hive full.

I commenced on 3 swarms the 10th of May, and now I have 11 swarms with the 3 old ones, and 2 in the woods, making in all 13 swarms. The last swarm I saved came out Aug. 23.

I did not aim to get any surplus honey this year, as I was after bees. **Gilbert Summe.**

Bringhurst, Carroll Co., Ind., Dec. 11, 1880.

It seems to me, friend S., I should hardly advise feeding new swarms, because the bees seldom swarm unless they are getting honey from the fields pretty freely; but as you succeeded well by feeding, it may be all right. My experience has been, that feeding bees when honey is to be had, just makes them stay at home, and they very often fail to get as much out of a feeder as their comrades who are not thus fussed with get from the fields a mile or so away.

MILLERS ON THE SPIDER PLANTS, ETC.

I am a subscriber to Gleanings, and also have your A B C book. I have gained a great deal of knowledge from them. I had been keeping bees for fifteen years in the old box hives, but never got as much honey from 6 hives as I have from one colony in the Langstroth, with Italians, or, rather, hybrids. I purchased a dollar queen last season, and am Italianizing. I took 90 lbs. from one colony and 60 from another this last season, though I think the past season has been a poor one. I prize the Spider plant very highly. I could see the drops of honey on it early in the morning, though I had to fight the miller and the taripin bug every night. There are thousands of them. I burn them with a torch of pine, at dark. **J. D. Cooper.**

Travellers' Rest, Greenville Co., S. C., Nov. 29, 1880.

I too, friend C., have noticed the great moths on the Spider plants in the night; and as I saw them, by the light of the lamp, fill their great bodies with the sparkling nectar, while they buzzed about in such numbers as to make it seem probable that not a sip could be left for the bees by morning, I too, thought of trying some plan to destroy them; but the only plan I could think of was to raise a field large enough so that bees and millers both could have a plenty. Perhaps your plan is cheapest, however; but somehow I rather dislike to lure the poor fellows with such a tempting floral feast, and then burn them to death.

A "PARODY" ON WINTER—AND BLACK QUEENS.

The flowery months of summer have come and gone, and all nature is bound up in the iron grasp of winter, and the hum of the honey-bee is silent in the retirement of their waxen home, and the jingle of the merry sleigh-bell is the order of the day. I think it would be a good time to "pop the question," Where did my black queen come from? On the 28th day of May last, I had a very fine hive of Italian bees; and, to keep them from running away in swarming, I divided them, putting the new swarm in a hive with comb where a black swarm had died about six weeks before. Three days after they had been put into their hive I opened them up, and found them all right and filling up with eggs. I thought I was getting on lovely; but, to my surprise, when the young bees came out they were all black; and in the meantime I had raised two queens from it which also proved to be black. Could it be possible that a queen would live that length of time alone among empty combs? There was no new swarm at the time. I did not see the queen when they were divided. There was no change in the old hive till September, when I found a dead queen lying in front of it. Shortly after, I had bees of a different color. My bees came out very well this spring, considering the condition they were in the fall previous. Most of them are very light. Six of them died from starvation, leaving 23 alive. About one-third of them did not swarm this summer. I have 43 this fall, mostly in very good condition. One-half of them will average 80 lbs. each, and I have taken 300 lbs. of box honey. I keep them in a cellar, ranging from 25 to 50 degrees.

FRANCIS GRAHAM.

Delhi, Delaware Co., N. Y., Dec. 15, 1880.

Why, friend G., I am really ashamed of you. Your "parody" on winter was very fair if you "hadn't went and gone" and upset it all in such an out-of-place way, and right before all this august company too. Just take a look at us,—sober, staid, and respectable as we are. No wonder you turned it off, and wanted to know where your black queen came from. So far as I can see, the black queen must have come from some other hive, and got in there by accident. Did not a small swarm of blacks unite with them, shortly after your division? It would seem such must have been the case, if you found freshly laid eggs within three days. The change in September I should explain by saying the queen was superseded, and her daughter had met an Italian drone, and thus produced Italians. Another explanation would be, that they had two queens in the hive all this time; but that is quite improbable. A queen would live in a hive alone without bees, scarcely 24 hours.

NOT "BLASTED HOPES" AFTER ALL.

We expected to go into Blasted Hopes this year, but we had quite a "boom" during the fall months. We took off all the surplus the latter part of July, which amounted to but little. Upon examining them again, about three or four weeks ago, we found the hives to contain from 25 to 65 lbs. of very nice honey, and hence we feel encouraged to persevere. Where the honey came from is a mystery to me. There was no buckwheat within two miles of us, and, besides, the honey is much lighter colored and better flavored than that obtained from buckwheat.

M. C. STEVENS.

LaFayette, Ind., Nov. 20, 1880.

PLANER SAWS.

The planer saw I got of you last week cut very nicely, but is entirely too slow. I got it for cutting off sections so they would do without planing. I do not like to buy a thing and then return it unless the person I bought of is perfectly willing to take back again; if you are, please tell me what you will allow me for it in trade; I do not want you to take it back at the price I paid you for it, but am willing to lose something for your trouble. T. FOOTER.

Cumberland, Md., Dec. 13, 1880.

The above seems to be the general verdict, that they cut too slowly, and we have taken back nearly every one we have sold. They are also quite difficult to file, compared with the common saws; but in spite of these two objections, there are many places where a planer can not be used, where a planer saw comes in beautifully, and on this account Mr. Gray says he would not think of running a bee-hive factory without at least one on hand. In regard to taking goods back: I am always glad to take back any staple goods that are in good order, you paying all expenses both ways, where it will be an accommodation. Goods made expressly to your order would be of no use to us. I make no charge for trouble.

A GOOD SUGGESTION ON INTRODUCING QUEENS, ETC.

My bees did very well as to honey this year, although I had but one swarm from 13 stocks, and lost the parent hive. It become queenless after the swarm left it, and, being in a box hive, I did not find it out until it was too late to save it by transferring. I made 3 stocks by dividing; have now 15—12 in Simplicity hives, 3 in box hives; were all blacks until August. I got 3 untested queens of W. P. Henderson, of which I lost one in introducing, saved the other two, then sent for three more and safely introduced all of them. They are all the Italians that are near here. I have never showed them to any one that had ever seen any before. The plan I succeeded with the best in introducing, was to feed well while the queen was in the cage; then when I went to release her I poured about a gill of strained honey along on the tops of the frames, and when every bee in the hive got his "bill" into it, I let the queen out, and she ran down on the combs, and I suppose she went all through the hive before she was noticed, as I could not find the bees paying any more attention to her than if she had been "native to the manor born." My idea of it is, that by running through the hive she gets the scent of all the rest, and is accepted as a matter of course. J. L. BUGG.

Fredonia, Ky., Dec. 16, 1880.

Reports Encouraging.

BOOKS arrived this morning. Thanks for promptness. We began season with 19 colonies; took 847½ lbs. comb, 530 lbs. honey, 11¾ lbs. wax, increased to 47, which are well packed, warm and comfortable at present.

MRS. E. M. PARSONS.

Terry Station, Bay Co., Mich., Dec. 20, 1880.

GOOD REPORT FROM RED CLOVER.

As 1880 is coming to a close, I will hand in my report. The season opened about ten days earlier than last season. The yield from fruit-bloom was the best that we have had for a long time. When the locust was in bloom, bees commenced swarming; we had several swarms during locust-bloom. Our hopes were then high, but they were soon to be blasted; for white clover was an entire failure in honey, and almost in bloom. Basswood furnished honey enough to start brood-rearing. The 20th of July I had a report ready for Blasted Hopes. Hark!

what does that hum of joy mean? why, honey from somewhere, and I must find out from whence it comes * * * * from red clover! and how they do work! August 10th, still at work, and one hive has sent out a rousing swarm. I gave them 4 combs, containing brood in all stages; 4 frames filled with fdn., and 2 empty frames, and also 48 one-pound boxes. August 20th, still hard at work on iron-weed, boneset, goldenrod, and buckwheat. September 10th, Jack Frost settled the business on short notice. Result: 12 hives last spring, 22 at present, with abundant supplies for winter, with about 300 lbs. surplus. My August swarm filled ten American frames and 20 one-pound sections. November 19th, bees all in good winter trim, I think. This morning the thermometer indicated 10° below zero. I peeped into a hive, and found the outside of a cluster moving about, and concluded I have them in very good shape. I will tell you next spring how I succeeded in wintering them, and how many section boxes I want. S. H. LANE.

Whitestown, Boone Co., Ind., Nov. 19, 1880.

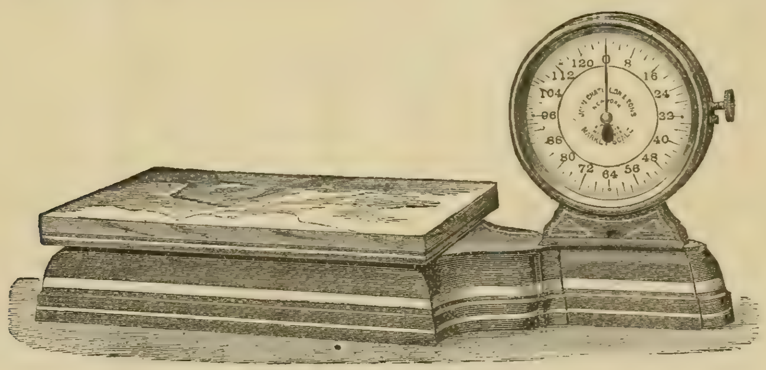
A SCALE THAT WILL TAKE A COMMON HIVE, AND REGISTER THE DAILY YIELD.

I TOLD you last month that I had under way a scale that I thought would meet all requirements. It was made by our great scale man, Chatillon, and will weigh from ¼ lb. up to 128 lbs. One of them is now in the office, and, by setting it on the floor, we can weigh the girls (the most of them) as fast as they can step on and step off from the platform. Of course, it will weigh boys too, providing they do not weigh over 128 lbs. In fact, it will exactly weigh me with coat and hat off, as I work at the type-writer. Where a great many things are to be weighed, such as hives of bees, or boxes of honey, etc., it will weigh them as fast as we can readily set the weights down with a book and pencil. Above, we give a cut of the same.

The scale has a marble platform that can be used, when not wanted in the apiary, to set a hive on. This marble slab is neat and convenient; for if you let a little honey drip on it, it can be quickly cleaned with a damp cloth; also in weighing any kinds of food or vegetables, you will not need to get a paper to lay on first, to keep the edibles from being soiled. A screw at the left of the dial takes off the tare, much the same as the Family Favorite scales, and a small screw just underneath this quickly adjusts the scales, if it ever gets out of adjustment. These scales are very nicely made, and I do not know but they are just as reliable as a beam scale, although there was a prejudice against them before the recent great improvements were made. The screw mentioned will take off tare to the amount of 25 lbs., and the makers say they can make them to take off still more, if desired; so you see we can set the dial to show just the weight of the bees and honey if need be.

By a little figuring, you can get the weight of an article weighing 150 lbs., for the 25 lbs. tare will make a little over that amount; but of course the pointer will not point it out as readily as it does any thing less than 128 lbs. The scale can not be injured by an overstrain, because the platform strikes the castings after it has been loaded down to the 150 lbs. or thereabouts I have mentioned. The smallest divisions on the dial are ¼ lbs.; but with practice we can get at even 2 oz. pretty accurately, so it will answer for all practical purposes for weighing honey. As the whole machine is only 33 lbs. in weight, it can be readily lifted by its convenient handles from floor to counter, and *vice versa*, as occasion may require.

There is a dial and pointer on each side, so if you are in any part of the apiary, or even off quite a distance, you can tell at a glance what the bees are doing. Now, as these scales cost me $11.50 at the factory, I can not well sell them, after paying freights, for less than $14.00, and I believe the usual price is $15.00. This sum is quite an item, I know, especially for those of us who are in the Blasted Hopes department; and if they were to be used for no other purpose than to set a hive of bees on in the summer time, I should hardly feel like recommending them; but, my friends, I do not believe there is one of you but would save a great part of the price of this scale, if you made it a point to measure and weigh every bit of merchandise you purchase during the year, and insist on having full weight and measure every time. I want you to do the same with me, and I expect to do the same with you. Let us check each other, and have every thing right *every time.*



SCALE FOR BEE-KEEPERS.

Ladies' Department.

WE started bee-keeping only last spring, with one colony, and now we have three, and had about 100 lbs. of extracted honey. We feel very much encouraged with our bee-keeping, hoping we shall be able to winter our bees all right.

MRS. R. BANGHAM.

Windsor, Ont., Can., Dec. 9, 1880.

NOT BLASTED HOPES(?)

Guess you wonder where I have been all this time. Well, we are a large family, and we all do like sweet very much; and so, instead of selling any to get money to buy an extractor, or even keeping any honey on hand to feed in a scarce time, we "just ate all we had." I would here remark, that in three months I increased 9 to 19 good swarms; but I had no smoker, and no money to buy; the bees were mostly hybrid, and stung me rather badly. I wanted to earn some money, and saw no way of doing it with the bees. Having no extractor, no surplus boxes, no money, and being a poor carpenter, I just opened a private school, and now have the public school of this place. My experiment was not "blasted hopes," by any means, because I knew if we sold nothing we would have no income. The poor bees have all perished but 2 colonies; one of them had my pet queen, but she's gone. She was no imported one, but I thought as much of her, I think, as if she had been. Please excuse my haste; but, being "school marm," I have to be careful how I spend time in writing letters. CLARA SLAUGH.

Daytona, Volusia Co., Fla., Dec. 20, 1880.

I think it was a "tip top" idea, your turning "school marm," friend Clara; but I do not quite see my way clear to approve of your course of letting the bees starve. Even if it was "fun for you," (and it wasn't fun either, was it?) it was *death to them.* You won't do so any more, will you, even if I do stop and not scold another word?

Blasted Hopes,

Or Letters from Those Who Have Made Bee Culture a Failure.

FRIEND NOVICE:—Should you run short of subjects for Blasted Hopes, I can furnish you with a big batch from this locality, right from the State of Wisconsin, from which State you have published some of the most flattering reports of honey yield for the season; for instance, the report of Frank McNay, in Nov. GLEANINGS, who reports 4700 lbs. of surplus honey from 44 colonies—an average of 106 lbs. and over, per colony. Then there are the reports of neighbor H. V. Train and C. H. G., of Mansen, Juneau Co., and Tibbets, of Downsville. These are all "wallopers." In the Oct. No. we have the report of our friend Morgan, "the A B C child that grew so fast," from Arcadia, who reports that there was one continuous flow of honey from May until the time he wrote, Sept. 3d, and still it continued to flow. It flowed so fast that the bees built combs on the outside of their hives, and stored honey under projections of hives in large quantities. "A swarm hived July 15th, and weighed July 31st, showed a gain of 79 lbs." Hurrah for Wisconsin! This is the land that floweth with—with—that floweth with honey. Well, hold on. I guess I have got off the track. I started out to furnish you subjects for Blasted Hopes; but the above don't look much as though their hopes were blasted. I hate to do it; it is very humiliating; but then, I will, and here it goes: In the township of Fayette, LaFayette Co., State of Wisconsin, there are about 30 persons who keep bees. They have all the way from one colony to 75. There were, last spring, about 350 stands of bees in the township, mostly blacks, and kept mostly in the old box hives. Some are beginning to use the frame hives, and are Italianizing their bees. From these 350 colonies, I think I can safely say that there has not been 700 lbs. of surplus honey taken this season; that is an average of only 2 lbs. to the hive. There has been but very little increase. I predict that there will not be more than two-thirds as many bees in this vicinity next spring as there was last. The past has been the poorest season for honey for many years; there was but very little white clover, which is the main dependence for honey here. Notwithstanding this drawback, some of our bee-keepers feel quite hopeful, trusting that their luck will change, while others feel like giving up the business in disgust.

Now, in conclusion, I wish to say that my hopes are not blasted. I do not keep bees alone for profit, but for amusement. I like to handle and fuss with the little pets; and yet I should like to have them pay expenses and furnish what honey we want for our own use. Last spring I had 20 stands; increased to 35; bought two queens of you with 2 lbs. of bees, from which I built up 2 very good stocks. My bees are all in the cellar. I have 8 Italians, 29 blacks. I got about 40 lbs. of honey in 1-lb. sections from one hive, and not more than 40 or 50 lbs. from all the others together. The most of my bees are in Simplicity hives. DR. C. ABRAHAM.

Fayette, Wis., Dec. 11, 1880.

FEEDING COMB HONEY.

I believe GLEANINGS to be a safe investment. My bees have done no good this year. I am feeding them nice comb honey at 15c. per lb.

GEORGE G. WADDELL.

Troy, Doniphan Co., Kan., Dec. 15, 1880.

I would not do it, friend W. I am fully satisfied that a like weight of granulated sugar syrup will keep the bees longer than honey, and, as a general thing, will prove healthier besides; 1 lb. of sugar will make 1 2-5 lbs. of syrup as thick as honey; and as the sugar is now but 11c per lb., the more wholesome syrup will cost but little more than half of what the honey will sell for in the market.

My bees nearly all died last winter. I lost 70, out of 85 stands. The season was a very bad one for bees; a great scarcity of honey, and my health was bad all summer and winter, consequently, bees were not cared for, and through neglect they died. I have 15 stands left. D. NEWELL.

Phillipstown, Ills., Nov. 29, 1880.

The old saying, "In trouble to be troubled is to have your trouble doubled," seems to be literally true in your case, friend N. It seems to be a uniform report from the friends, that where their bees have not had the proper care, from any cause whatever, they have died as by a pestilence. This holds true of all domestic animals, however, and shows that, to make them available, they must have our best attention.

Notes and Queries.

I HAVE worked with bees over 20 years, and used the chaff hive the last three years with good satisfaction. Have put up 148 stocks for wintering, the present winter. They all appear to be in good condition. I got a very short crop of honey the past season. J. M. FRANCE.

I almost forgot to say, I can smoke the eyes out of a regiment of rebels with your smoker in a half-minute. WM. S. ROBERTSON.
Lostant, La Salle Co., Ill., Dec. 14, 1880.

AMBER SUGAR-CANE.

Our cane manufacturer said he made the best molasses out of my "Amber" cane he had seen since he commenced, 16 years ago. N. J. ISRAEL.
Beallsville, Monroe Co., O., Oct. 28, 1880.

Don't put me in Blasted Hopes any more. I don't think I have lost any thing yet; for, if I should sell out, I could get about $30.00 more than the entire business cost me. LEE WARNER.
Allison, Ill., Dec. 8, 1880.

AMBER SUGAR-CANE SEED.

From one pound of the seed which I purchased from you last spring, I obtained 62 gallons of most excellent syrup. FLETCHER E. AWREY.
Cottam, Ont., Can , Dec. 6, 1880.

HONEY FROM PEACH-BLOSSOMS.

My bees made from 10 to 20 lbs. of honey to the stand, from the peach-bloom this spring, besides what they have gathered from other sources. S. A. STREET.
Rocky Comfort, McDonald Co., Mo., May 13, 1880.

HONEY FROM COTTONWOOD-TREES.

Please let me know if bees work on cottonwood trees. If you do not know, please inquire through GLEANINGS, and oblige. C. W. KENNARD.
Carey, Wyandotte Co., O., Nov. 24, 1880.

[I can not answer. Can some one else?]

I have 27 swarms now in pretty good condition. I got two swarms of bees this fall for nothing. The party was going to brimstone them, so I took my smoker and gave them a good smoking; took them out of his hives, and took them home in empty hives and put them with two of my weakest swarms. G. H. SHEEVES.
Clarksburg, Grey Co., Ont., Can., Nov. 17, 1880.

DOUBLING UP IN THE SPRING.

The season has been the poorest for honey ever known here. As I am a farmer, and do not wish to keep a large stock of bees, how will it do to double up my stocks in the spring, even if they are pretty good? Some bees are dying already; some have fed a good deal and some are feeding now.
Montague, Mich., Dec. 4, 1880. E. Z. GREEN.

[I think, friend G., it will do first rate for farmers, or anybody else, to double up their stocks in spring, or at any other time, until all are strong and ready for business. Especially is this the case where one does not care for increase, and seasons are as poor as they have been in most localities for the past two years. Strong colonies will usually make a surplus, even during poor seasons.]

A STORY WITH "TWO MORALS" TO IT.

The particulars of our deal has been the following: I sent two dollars by mail—one to pay for GLEANINGS, and the other for A B C. After waiting some time, I dropped you a line, stating the fact. You had not received the money, but you sent the A B C book, paper cover, and offered to stand half the loss. I answered, saying I would stand my own loss. The money came back to me after going to Washington. I sent it again. Upon receipt of same, you sent me another A B C book, cloth cover, with letter stating that I might send back one of the books; but I concluded that, as I was dealing with a friend and an honest man, I would give the paper-cover book to a very poor man, as honest as he is poor, and a bee-keeper. He once had a fair property, but the patent-right men have used him up. W. C. NEWTON.
Fulton, Oswego Co., N. Y., Nov. 29, 1880.

[You did right, friend N.; and may God bless you for your kindness to your neighbor, and your kind words to us. Once more, boys, beware of patent rights.]

LETTING THE BEES STARVE.

My bees are dying rapidly this fall. I have lost 9 stands already; might have saved them if I had been able to buy the sugar to feed. But such is a poor man's misfortune. E. L. KREGLOE.
Lexington, Va., Nov. 30, 1880.

[I am very sorry for your misfortune, friend K.; but are you sure you have done the very best you could in the matter? Could you not have sold a part of them at some price, and obtained money to buy feed enough for the other part? Of course, I do not know that you could have done better; but after investigating some cases of a like nature in our own vicinity, I have almost always found some way by which the sugar could have been provided. Do you use neither cigars nor tobacco? do you never remain idle a day when you could earn 50c.? Are you sure you do not invest in a single thing that you could not have done without better than to let your bees starve? Please excuse me, if this sounds meddlesome; but such questions have started more than one brother on a better path, and they may help more than one whose eyes meet these pages.]

QUARTER-BLOOD ITALIANS.

I notice on p. 216, May No., where one of your contributors speaks of quarter-blood queens. Now, I had got it into my mind that there was no such thing as a quarter-blood queen. Dr. Harrison, a bee-man living about five miles from me, said to me at one time, while talking, that, even if an Italian queen were mated with a black drone, the drones of that queen would be pure, and *vice versa*. Now, do queens lay drone eggs without being mated? If so, will such eggs hatch? If they will, then the drones from such eggs must be pure, and, consequently, there would be no such a thing as a quarter-blood queen. THOS. R. TURNHAM.
Rockport, Spencer Co., Ind., May 17, 1880.

[You have got the matter a little mixed, friend T. A hybrid queen, such as you mention, will produce pure drones, but not pure workers nor queens. The queens would be half blood, of course; and if they mated again with black drones, we should have hybrid drones and quarter-blood Italians, as the progeny of such a queen. Such a hybrid queen does no harm in an apiary unless she is allowed to raise queens, as in natural swarming. Then we may have any admixture.]

FILLING COMBS WITH SYRUP FOR FEEDING.

Do you know of any plan of filling empty combs with honey, so that they can be used as feeders?

E. L. WOODSIDE.

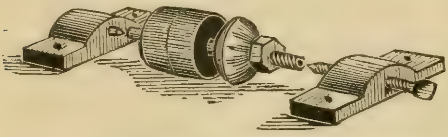
Baltimore, Md., Nov. 30, 1880.

[Yes, sir; pour the syrup so as to fall a foot or more, from a sprinkler, and you can fill a comb completely. The plan is old, and has been mostly dropped, because of the trouble and daubing it usually entails, and the danger of inciting robbing.]

A CHEAPER MANDREL FOR FOOT-POWER SAWS.

A GREAT many have been asking, for some time back, if we could not furnish a cheaper mandrel for those who wished to use home-made foot-power saws like the one (or similar) described by friend Hutchinson on page 385, Vol. VI., and by friend Carpenter, page 163, May No. for 1879. It is true, our friend G. A. R., on page 366, Vol. VIII., did give a very ingenious plan by which a wooden mandrel might be made; but not all have skill to make even this. Some of the friends wished us to make them; but if one were going into the business of making mandrels, it would be better to make a durable steel one.

Well, just in the nick of time, as it were, our friend below comes up, bringing a very pretty mandrel, or, at least, sending us a sample by express, which amounts to the same thing. We at once ordered a couple of dozen, and are looking for them daily. Here is what he says of it, with a picture made from it by our engraver.



DE WORTH SAW-MANDREL.

I shipped sample saw-mandrel to-day by express, as postage costs nearly as much. The mandrel is subject to your alterations, if there is any. Your price list says, 10 inches long; but as I dispense with the journals, I make them only 7 in. long, and there is no need of their being over 6 inches long; but I can make you mandrels the same as sample for $2.00; but I would want an order for more than a dozen or so, as I would have to buy several tools that I could not get along without. Now, then, if you will give me a chance, I will get to work. I am trying to build myself up with bees, and I don't spare any time in doing so. I have 17 hives, and will get 10 more this week.

DIRECTIONS FOR USING FOOT-POWER SAW-MANDREL.

See that both boxes are level, and then tighten set-screw only until there is no shake in the mandrel. Apply a little oil, and you will find it will work finely. Please notify me when you try it; and if it comes in good order. WM. DEWORTH.

Bordentown, N. J., Nov. 8, 1880.

To see how the mandrel would work, when sent out to our A B C class, I used it to fill the first order we got for one of the wooden ones spoken of. Here is the result:—

I received the goods several days ago. When I got the bill I was much surprised to find myself charged $2.60 for a wooden mandrel (which I ordered), but when goods came I was as much surprised to find a better one than I expected. Thanks for you discretion in sending it. I put up a saw yesterday, and it "works like a top."

Greenville, Ga , Dec. 13, 1880. F. M. LEDBETTER.

You see, I have given our friend who made the mandrel, a free advertisement; and I am willing to give you all one when I find any thing that I think will prove a public boon. Is not this right? If I discourage patents, I certainly ought to do something else to encourage invention. Now, here is another point. I am going to make a public test of your good nature,—or call it, if you choose, liberality. I told "right out," just what these mandrels are going to cost me, and what I am going to sell them for. It is generally accepted, in all kinds of business, that it won't do to let customers know what goods cost. Why won't it do? Well, because we are all so prone to selfishness, I suppose. Now for the test: if you know those mandrels cost me only $2.00 each in two-dozen lots, are you willing to pay me $2.75 for them? I am pretty sure a great many of you will say 50c profit would be a plenty. Well, I wrote the same thing to friend De Worth, but he thought it hardly enough, and suggested, if I am correct, that we should retail them for $3.00. I split the difference, and called it, in my editorial notice last month, $2.75. As a reason for making the profit 75c instead of 50, I would suggest, that the freight is to be paid on them from friend D. to myself; that I have to invest cash to the amount of $48.00 each time I order, to lie still, perhaps, several months, besides the probability that something later may at any time supersede any such goods, and necessitate selling them at cost, or not at all. If I tell you what all my goods cost, and what I sell them for, are you sure you will not feel less friendly toward me than you do now, and that I shall never look confused and embarrassed when I own up that I charge you $2.75 for an article that costs me only $2.00 or perhaps a little more. When the matter comes right out before you all, I confess I rather wish it was put at only $2.50; but friend D. does not wish me to sell them so low, and I do not feel right to decide the matter without his permission. Do you not catch a glimpse of what a millennium we should have in business matters if there were no longer any necessity for having any thing to be concealed?

We suggested only one change in the mandrel sent us, and that was, that the collar that holds the saws be made so as to be one piece with the pulley, except a small dividing groove. If wanted by mail, the price will be 58 cents more; the price to be $2.75, unless friend D. consents to have it $2.50.

Our Homes.

He that goeth forth and weepeth, bearing *precious seed*, shall *doubtless* come again with rejoicing, bringing his *sheaves* with him.—PSALM 126:6.

SUNDAY-SCHOOL was over; I had finished my dinner, and was on my way down to visit my mother, as usual, during the three hours that intervene before the young people's prayer-meeting. I had gone about half a mile, and was reflecting that my life seemed rather unfruitful in the work of saving souls for the past few weeks. Was it possible that, amid the cares of business, I was losing that happy enthusiasm that I had especially enjoyed Sabbath afternoons, and that my life was settling down to a kind of letting the world go on as it pleased, so that it did not interfere with my plans and purposes? How many a Christian worker has had similar thoughts! The Abbeyville school was stopped; it seemed no fault of mine, but still was it not possible I could have done more to have kept it going? Our class at the Infirmary is stopped too, because of the inconvenience of finding an hour for services not conflicting with other duties in the short winter days. It is true, I have our own great Sabbath-school on my hands; but they have abundant helps and good teachers, and some way I do not feel just as happy after the school is over as I do after my work among those who have not had all these advantages, and to whom the gospel is, at least in a measure, new. I longed and hungered, as it were, for that joyous exuberance of spirits that I feel after explaining the way of salvation to some poor boy in jail. Was there any such work within my field that God wanted me to do? In that little book called the *Still Hour*, by Austin Phelps, he says that a Christian has a right to have this joyous feeling always. I firmly believe it is possible for us to have it, if we are right in the harness, where God wishes us to be. As I walked along I prayed to have my way pointed out, and promised to follow in it. Almost immediately my mind recurred to a young man whom I had met a few times, but whom I felt pretty sure was not a Christian. Somebody told me he had lost his property by some misfortune. I knew he was working hard, for I had noticed him pushing ahead with considerable energy in different employments, and the last time I met him he had a lemonade and candy store next to our counter store at the fair. My thoughts ran something like this:

"Go and see this brother this very afternoon."

"But I do not even know where he lives, and I am half way down to mother's now. I will go next Sunday."

"Next Sunday you may not feel like it; the roads may be bad, and your besetting sin is to never do at all the things you do not do on the first impulse."

I began meditating whether or not this were not really the voice of God, speaking something as he might have talked to Jonah when he was told to go to Nineveh. As I pondered, I walked slower.

"Why, I rather think he lives at or near B—— ; but that is three or four miles another way, and I am now a full mile toward mother's; besides, she is watching for me, and will feel sadly disappointed if I do not send her any word I am not coming. Besides, it would be almost dark before I could get there." The objecting voice almost said, too, "What in the world will he think to see you coming away off there on Sunday, with no sort of a rational errand in the world." But the last observation was very feebly offered. I had come to a standstill.

"Nine miles is nothing for you, my boy; and if you get tired, you know, from past experience, that God will give you strength by simply asking for it. You have told mother before, that, when you fail to come, she must keep in mind that a call has come for you to go elsewhere."

"Right about, face," I turned, and I was happy already. As I passed the jail, I stopped and explained to the one inmate there, who was just about turning from a wasted life to immortality, that I might be late before I had my usual talk with him; and when I explained where I felt called to go, he knew the man, and with the help of the sheriff, told me where he lived. As I passed out through the iron-barred door he said:—

"My best wishes go with you on such an errand, Mr. Root."

"Do you not mean, friend D., that you will pray for me while I am gone?"

I can not remember what his reply was; but I know, by the look in his face, that it was not an unpleasant suggestion. As I passed over the hills I was somewhat weary; but God gave the strength as it was needed. To be sure, I went on foot; for, some way, it does not seem as if I could do good work without the exhilaration of walking; and, besides, people treat me differently (at least it seems so) when I come on foot and alone. When on a hill, where I could see the house, I spoke to a couple of young men, and after I had passed I saw them watching me. Perhaps they were curious to know what had brought me out of the way so much on such a day. As I crossed the bridge near the house, a crowd of temptations assailed me, just as they have a hundred times before. All joyousness had gone, and I felt for the time that my errand, and the whole thing, was the biggest piece of "tom-foolery" that I ever went into before. I stopped and gazed into the frozen river, and at the same time gazed into these feelings in my own heart. I wondered where they came from, and why it should be so every time. I was not afraid now, for I had seen them soon give way before, to a different feeling when I pushed ahead. I trembled some as I raised the latch to the gate; but I prayed more earnestly than usual, if possible, that God would show me plainley why I was thus called away over here, and that his Spirit might go before me and make the work sure. After I had got into the house, and received a pleasant welcome, the painful feeling vanished, and it was no great task to speak.

"My friend, I have taken the liberty to come clear over here on foot to talk with you, and to invite you to accept Christ as your savior and your guide. If I have made a mistake, or if I am intruding, I will go away at once, without another word."

"No mistake at all, Mr. Root; I am very glad to see you, for I know it is just what I and all the rest of us ought to do."

In a few minutes the young men I have spoken of came in. At first, I was so short-sighted as to think this might prevent my having my talk with him; but almost at once something whispered that God was guiding it all, and had sent them. Thereupon I told them my errand, and that, inasmuch as Christ knew no differences, I would tender the same invitation to them.

Pretty soon, still another young man came in, and I said the same to him, and finally we had almost enough gathered there for a little prayer-meeting. After some talk with them all, some one suggested we should have a Sunday-school started there every afternoon, and you may be sure I gladly enough accepted the invitation to lead them. After singing "Sweet Hour of Prayer," and asking God to bless our undertaking, I came away. As I got outdoors, I found it was dark; but there was no darkness on my spirits now. Pretty soon I saw some one coming after me. I spoke, and found it was one of the young men I had left there. He told me his father had recently died, and that, while on his death-bed, with his Bible near him, he enjoined his boys to lead Christian lives. A few weeks had passed, but yet he had taken no steps to unite with Christian people. Was it accident that led me over in this out-of-the-way place this afternoon, or was it the still small voice that so often pleads with us, and yet is so often disregarded when we can not see exactly the whys and wherefores of it?

Do any of you ask, my friends, what is the good of a Sabbath-school, after all? Well, I will try to tell you a little of what I hope it will do. As I pass the saloons of our town, I notice that very may of those who enter are boys from the country. They live a few miles out of town, and have always been in the habit of getting a glass of beer when they come to town on almost any kind of an errand. Once in a while these boys get into jail, and then I get acquainted, and have a good talk with them. They almost always say they have never been to Sunday-school, and a good many times it seems as if no one has ever invited them to come. Suppose I could have these talks with them before they get into jail; do you not think it would save some expense to our State and county? May be it might save an immortal soul. Will it not be worth while to try?

Again, it is a hard thing to reform a man grown. If they are reformed, they are very apt to get back among their old associates unless they are pretty closely watched and cared for. If we can take the boys and girls before they have grown into fixed, bad habits, they are far more apt to stand. It makes a terrible wrenching of things, if I may so express it, to take a strong man and bring him to Jesus' feet as a little child. Battles have to be fought day by day that might have been saved if he had been led into wisdom's ways when his mind and appetite were young and tender. May God have mercy on those who have grown up in their sins!

Some of the friends will have it that I propose to teach in the Sabbath-school, and on these pages my views, while I will not give them a chance to answer and express *their* views. They are right thus far, and no further; *viz.*, I certainly can not consent to have these pages filled with arguments and controversy on theology, doctrine, which day is Sunday, baptism, or any like matters. It is not my business, and I know God has not called me into any such fields. If such subjects must be discussed, talk them over with your pastor, or the best men in your churches, and decide for yourselves. My work I can illustrate best in the following little story:—

A poor market-woman was once, in order to get along and "keep even with the world," in the habit of using a peck measure that held a scant peck. She knew it was wrong; but competition was so close she had to do it, or, at least, she told her conscience so, and so the best friends she had, together with her foes, were treated (or, rather, cheated) alike, day after day. Finally she decided, one Sabbath, to go to meeting. It some way happened that the sermon was on honesty, and, although much of the talk was beyond her comprehension, she gathered enough so that she went and burned up the scant peck measure the very first thing she did when she got home. The next day a friend said,—

"Why, Mary, they tell me you have been to church."

"Yes, I went yesterday."

"Who preached?"

"I don't know."

"What was the text?"

"I do not know."

"What was the sermon about?"

"I can not remember that either."

"Why! can you not remember some story or anecdote, or something the minister said in his sermon?"

She declared she could not remember any thing.

"Why!" said her friend, "it certainly didn't do you any good, if you don't know who preached, what he said, nor any thing about it."

"But I tell you it did, for I went and burned up that small peck measure the first thing I did when I got home, and I am going to give full, honest measure, after this, as long as I live."

Who sent home that sermon to her heart? and whose voice was it that she heard? Was it not God's voice? and are not such sermons just the kind we want? Is there any difference of opinion in this matter? Now, if I can so write to you that you forget me, what I say, and every thing else, except the truth that I am endeavoring to send home to your hearts through God's voice, which I hope sometimes reaches you through these pages, I am content.

Now, to those who are suggesting a different course for these Home Papers, and who think I am omitting important subjects, I would respectfully suggest that my way seems to be bearing good fruit. I can not say that any one of you really burned up a bad peck measure literally, because of these talks; but great numbers have written me that they had started with fresh vigor in serving the Lord, and some few have turned right about, and are leading new lives. A few days ago a good friend wrote he was not a professor of religion, and did not attend Sabbath-school; but his letter seemed to say he was not very far off from the kingdom. I wrote him briefly, and, if I am correct, then kneeled down and prayed God to move his heart, for I felt then vividly what a tremendous undertaking it is to get a full-grown man to relinquish his stand and submit to be led as a little child. I know he wields a strong influence in his vicinity, and so I was more deeply anxious. Here is a postal from him, right under my hand.

Friend Root:—Between you and my children, I am "boxed." As I was on my way to Sunday school Sunday morning, I said to my oldest girl, "The next thing after getting me into your Sunday-school will be getting me into your church." She very coolly replied, "If the church can stand you, I think you might stand the church!" I said nothing more then; but before the close I had to give five dollars towards a Christmas tree; and now they want $5.00 more for a library. What will a library for say 140 scholars cost with you—say 2, 3, 4, or 500 volumes in neat book case? L. M. SHUMAKER.

North Danville, Pitts. Co., Va., Dec. 14, 1880.

May the Lord bless that "oldest girl," friend S., and all the rest too, as well as the whole school. I felt like shouting glory as I read the card; and were it not one of my besetting sins to get extravagant, at times, I do not know but that I should have done so. I do not sell the things you mention, but I have desired two of the best publishers I know of to do the best they can for you. The work that is opening before you may take some of the treasure you have laid up here on earth; but when you are on your dying bed, taking your last leave of these kind friends, with all these Sabbath-school scholars gathered about you, a crown of glory will be yours, and the companionship of angels will be yours, as you cross the dark river. "Inasmuch as you have done it unto one of the least of these, you have done it unto me."

Every time I get a letter from the friend who next writes, I fall to wondering why I could ever have done any thing that should merit such kind words as he writes; but at the bottom of the letter I always find the well-known signature of our friend Parshall; and when I reflect that his life seems, through God, to have been the fruit of these Home Papers, I feel like shouting glory again.

Now a word to you, brother Root! How I wait and look for the first of the month to hear you talk, and how it encourages me, and I feel like grabbing you by the hand every time I read Our Homes. My brothers have forced on me the office of class-leader, besides Sunday-school superintendent, and your kind words does me worlds of good. May God bless and keep you, is my prayer. After reading the last Homes, which I did before breakfast, I opened my Bible, as you spoke of "in the middle," and read the 91st Psalm. Oh what blessed comfort and promise we find in that psalm! Read it; and I should like all the readers of GLEANINGS to read it and appreciate it as I do. JAMES PARSHALL.

Skidmore, Nodaway Co., Mo., Nov. 11, 1880.

In regard to the matter of midnight assassins: Here are two letters on the subject,—one on one side, and another on the other:—

Is it not a Christians duty to protect his house and family? Whosoever stealeth, murdereth. Would you stand back and see your wife and children bound, and perhaps gagged and abused by the burglar to complete his spoil, and offer no resistance? I should think that takes a coward. Do you think it is a Christian's duty to suffer himself to be robbed of his hard toilings, and perhaps bread, and offer no resistance? I answer, No! And I will say that I think it is a Christian's duty to protect his wife and family, by crippling the midnight prowler, as it is a warning to others to lead a holier and better life, and pray to the Lord God for their daily bread. PRESTON J. KLINE.

Coopersburg, Lehigh Co., Pa., Dec. 7, 1880.

In reading Our Homes in the Dec. No., I was so glad to see the letter of June 4th, from J. Sykes Wilson, that I have wanted to write you on the subject of non-resistance, but circumstances prevented. Now, you say, "What is the Christian to do when he finds some one with his hand in the pocket of our trousers? Answer, any one."

Suppose it was our own brother according to the flesh, the one we love more than life; would we shoot? would we strike? would we not pray, rather, that he might not be found out? Would we not say, O my brtoher! this not only, but my life, is thine; come and get it if thou has need; but do not come in that way? If we are disciples of Jesus, laboring for the love of God to bless humanity, we will not care who takes the money, so we can do them good. If we recognize tnat all there is belongs to God, and he causes the rain to descend upon the unjust as well as the just, I am well satisfied that, in the case above, we should pray to the Lord for instruction, and for the conversion of the thief; and remembering, "not by might, nor by power, but by my Spirit," we should depend entirely upon this Spirit; and if the money was taken away, wait to see the object of the Lord in permitting such things to happen. It might be to try our faith; it might be to bring the thief to Christ by the workings of conscience. There are many ways of bringing sinners to the Lord, and our ignorance should not presume to question God's wisdom; and the example set by Jesus, of living to do good and bless humanity instead of making and keeping money, should be more practically considered to-day. The teachings of Jesus are practical to those who live to do the will of God; but they are impractical to those who seek rather the riches of this world. "Give unto him who asketh of thee, and from him who would borrow, turn thou not away." Who would steal from any one who practices that teaching? No one! Still comes the question, What shall a Christian do if some one steals his money? I hold, a Christian can not own any money; it is all the Lord's, and all he has to do is to ask the Lord what to do with it; and does he not promise to instruct us on all occasions? I am afraid that if we are not careful we will be in the position of the priest and elders to whom Jesus talked. (See Matt. 21:31.) I used to be an infidel and a public advocate of infidelity, and know their strong point is, that Christianity is not practical; they say, "You Christians care as much for money as we do, and depend as much on the strong arm of the law by force to protect it for you." Now, I believe Christianity is practical, and we do not need the law; but the government of Christ is sufficient; his kingdom has come to those who will recognize and look entirely to him. Who will trust the Lord —make Christianity practical, and take away the strong weapon of the infide ?

I want to be a Christian, and with the Savior stand;
To live as he has taught—be guided by his hand;
For grace and love is all there is on earth worth living for,
Though many blessings are around and many more in store.
I would gladly give them up, or lay their pleasures down,
To take the Christian's cross and wear the Christian's crown;
To be at one with Jesus, Lord, in the blest abode above,
To live in heavenly harmony—be filled with holy love.

Praying that the good work you have started to do may go on to perfection in Christ, I am yours,

ISAAC B. RUMFORD.

Bakersfield, Kern Co., Cal., Dec. 12, 1880.

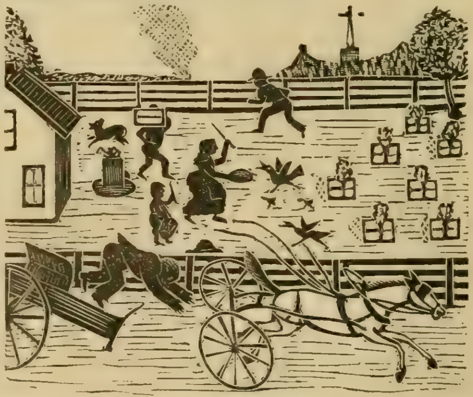
Gently, my friends, both of you, while we reason together. You may not be aware that this question is now agitating the greatest minds of the world.—What shall we do with criminals? It is not likely it will be settled all at once; and it may not be in our day that it shall be decided there is a better way than to shoot down for the sake of preserving life. Great difficulties stand in the way of friend R.'s plan, and I will give you one of them. Suppose you are a bank clerk, and are employed to guard the property of your fellow-men; are you going to tell the thief to take it along? A great part of us are guarding the property of others, and are in a measure responsible. Now, in defense of—let us say not shooting—please consider that you are in a measure responsible for every man that turns assassin. In a great majority of cases, you have open saloons in your town where boys are trained to be assassins. You can close these in a twinkling, if you will, only a few of you, join hands. The boys of your county are pining in solitude in your jails, where they would gladly listen to a kind word from any one of you, and yet you withhold it, most of you. These boys can be raised to a post of honor and usefulness—nay, they may be, by the love of God, led from their bad ways, and sometimes, in just a few months they may be at work rescuing others.

Well, now while such is the case, is it not a terrible thing to shoot these boys down? You may say it is all very well to talk to them while in jail, and ask me to try such talk while they are in the acts of robbery. Perhaps I am not equal to the task; but I think there are those who might do it. Perhaps there are many of us who might attain to it. In any event, it is our privilege to labor with humanity before they get to these lengths. No man becomes a burglar or assassin at once. He has to be drilled by Satan, and pass through many intermediate stages. On another page we are told of two of our fellow-men who are in the intermediate stages that lead to crime because of their bees and grapes. It is a terrible thing to take the life of a fellow-man, my friends, and I would to God you all thought it a terrible thing to quarrel with a neighbor. If it is necessary that life should be taken, shall it not be only as the last, the *very* last, resort?

MR. MERRYBANKS AND HIS NEIGHBOR.

HOW FRIEND M. BROUGHT THE "SUNSHINE."

BEFORE going on with my story, I shall have to go back a little, to show just why it was that even the sight of friend M.'s good-natured face brought a better feeling to both father and son. You doubtless remember about the swarm that ran away last summer. Well, you remember, too, do you not, how the horse got frightened and broke his buggy, and he came tumbling into the dust? Come to think of it, I believe I will give you the picture again, so you will recall the whole scene to mind.



"SWARMING TIME."

Well, friend M. picks himself up, not much worse for his sudden stop. Old "Dobbin," as the distance widens between the general commotion and his nag-ship, is not so badly scared as he thought, and is easily caught by a neighbor hurriyng to the scene of action.

But the bees—oh where are they? sailing away, a mere speck in the blue sky.

Mr. M.'s neighbor was completely discouraged, and as he turned away, says, disconsolately,—

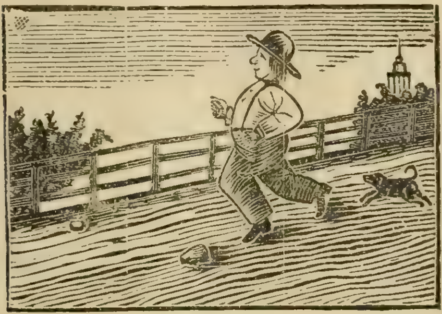
"There! that's just the way with bees; there goes all honey and profit too, for this year."

Not so with friend Merrybanks, however. His tumble in the dust had in no way abated his zeal, and upon the spur of the moment he burst forth with,—

"They ain't gone either; we'll follow 'em and bring 'em back. If you don't want to go after them, I'll give you $2.62½c for them up there on the wing, and get them myself."

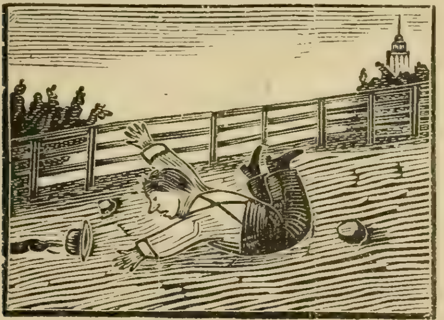
I confess it was a little singular that friend M. should offer just the above-named sum, to the splitting of a cent; but as our story proceeds, we shall perhaps find out why he named just that exact amount. As for the bees, no time was to be lost; and as the offer was immediately accepted, he started in pursuit, while his neighbor resumed his occupation of nailing up the hog-pen. Somehow that hog-pen seemed to need a great amount of fixing to make it so the pigs wouldn't get out and make a general raid on the neighborhood every now and then.

Off goes friend M.'s coat and vest; and, with his eye on the bees and his feet anywhere but on solid ground, he starts off, down the hill back of the church.



MR. MERRYBANKS AFTER THE BEES.

Now, since friend M. has become a beekeeper he has improved in health by outdoor exercise, until you would hardly recognize in him the same individual that he was when we first met him. In fact, so robust has he become, that, when his foot hit on a round stone which turned over, he tumbled flat, and rolled clear to the bottom of the hill.

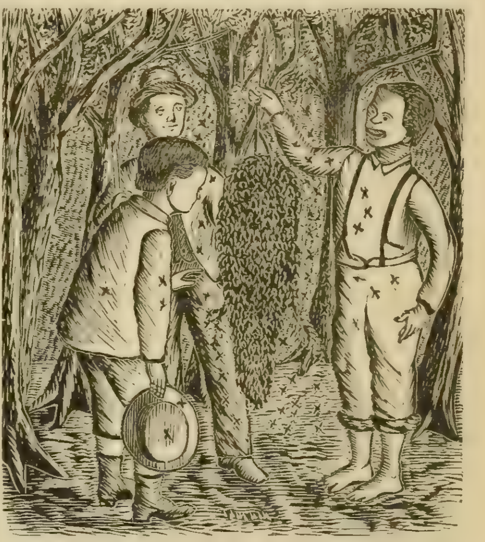


"HURRAH FOR THE BEES!"

As he picked himself up at the bottom of the hill, and rubbed the sore places, looking first one way and then the other, to collect his ideas and get the points of the compass, the first words he heard were,—

"Hurrah for the bees!"

These words came from John, his neighbor's boy. As he heard his father selling the bees to friend M., he set down his hive on the top of the swill-pail, and watched earnestly to see what M. was going to do with them after they were bought. As he doffed his coat, John viewed the proceedings very intently, and was not slow in following after the decamping swarm. With his light summer clothing, he very soon outran the owner of the bees, and the shout that friend M. heard was occasioned by the sight of the whole swarm of bees settling upon a leafy limb of one of the highest trees in the woods. John had caught a portion of the bee fever from our friend M., and the fit was on, after his exercise of the brisk run. On the impulse of the moment, he climbed a small tree that stood near where the bees were swinging from the end of a limb, and, with a 10-cent jack-knife that friend M. had made him a present of, he cut the limb, slipped carefully down the tree with his prize, and, by the time Merrybanks had found out where the boys and bees were, he was standing on the ground, the center of an admiring audience (of two), while he held up his prize. Our artist has tried to depict the expression of pride and joy that shone in John's eyes (and mouth(?)) as he held the limb containing that whopping runaway swarm up to view.



JOHN WITH THE BEES, AFTER CLIMBING THE TREE.

Now you know why John and friend M. were fast friends, and why just the sight of friend M.'s rosy face and round figure brought relief to John that wintry morning. Next month we will try to tell what happened to that bee-hive John left sitting on the swill-pail, when he started after the bees.

MRS. COTTON.

At the request in our last No., for facts from those who had sent Mrs. Cotton money, from which no returns of any kind had been received, it seems there were, after sifting it all down, very few such. If her fault has been one of sending goods that did not give satisfaction, rather than not sending goods at all, it is quite likely we have been too severe on her. It is true she did not send me goods for the money I sent her, but she claims now the money was returned to me. Although I never got it, it is quite possible it was sent, and if she has settled satisfactorily with all others, I will cheerfully drop my complaint. Now, friends, is the time to speak out, if you have aught to say against Mrs. Cotton; if not, forever hold your peace.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," at same price.

I have for sale 500 lbs. honey from heartsease, which I will deliver on board cars here for 9c per lb. No charge for packages. JAMES A. GREEN.
Dayton, La Salle Co., Ill., Dec. 13, 1880.

Wanted, one barrel pure extracted honey, from near this place. Correspondence solicited.
J. B. DINES.
Annapolis, Iron Co., Mo., Nov. 30, 1880.

CITY MARKETS.

CINCINNATI.—*Honey.*—Comb honey is of slow sale, and brings 16c on arrival. There is an active demand for extracted honey, which brings 8@10c on arrival. Choice clover honey scarce. I have paid 11c per lb. in several instances.
Beeswax—is quoted from 18@22c.
Cincinnati, O., Dec. 23, '80. C. F. MUTH.

CHICAGO.—*Honey.*—There is plenty of honey in this market to supply the demand, and prices remain the same on comb honey—20@22c for choice light lots in small boxes, and 12@14c for dark. Extracted honey, 8@10c.
Beeswax.—20@23c for light, and 15@17c for dark.
ALFRED H. NEWMAN.
972 West Madison St., Chicago, Ill., Dec. 22, '80.

ST. LOUIS.—*Honey.*—Dark comb, 14@16c; fancy do 17@19c; strained and extracted, 9@10 in bbls., and 11@13c in small packages.
Beeswax.—Prime yellow salable at 21, dark at 20c.
Dec. 23, 1880. R. C. GREER & CO.
No. 117 North Main St., St. Louis, Mo.

NEW YORK.—*Honey.*—Best white Comb, small neat packages, 12@18c; fair, 14@16c; dark, 12@13c. White Extracted, 9@10c; dark, 7@8c. Southern strained, per gal., 80@85c. *Beeswax.*—23@24c.
The can of honey you sent us is on the writer's desk and will be on his table with buckwheat cakes by to-morrow morning, after which I can better say as to its merits. Thanking you for the honey, and with a merry Christmas for all connected with GLEANINGS, I remain
Very truly yours, A. Y. THURBER.
New York, Dec. 24, 1880.

GLEANINGS IN BEE CULTURE.
A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, OHIO.

TERMS: $1.00 PER YEAR, POST-PAID.
FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, JAN. 1, 1881.

Charge them that are rich in this world, that they be not highminded, nor trust in uncertain riches, but in the living God, who giveth us richly all things to enjoy.—I. TIM. 6:17.

◆

IN our prayer-meetings and Sunday-schools, we as a general thing think it better to hear briefly from a great number, than to have a few occupy all the time. Now, will not the same rule apply in our reports here? In my drawer are a great many long letters—in fact, heaps of them; but the brief reports, right to the point, are scarce.

IN answer to many questions from those who are thinking of going into the supply business, I would say we can give no discounts better than those mentioned in the price list, unless you wish to purchase in larger quantities than are mentioned there. In this case, an estimate will be given if you will mention what you want, and how many. The prices are alike to all. If you want goods at wholesale, you must buy by the tens or hundreds.

THE *Sunday-School Times* has no club prices except the journals of the club be all sent to one address. This course obliges every one who gets up a club to do it around his own postoffice, and gives him good pay for thoroughly canvassing the field, resulting in extending the circulation of the paper, which is the sole object of giving a commission to those who get up clubs. Why is not this a good way to do?

A WEEKLY BEE JOURNAL.

FOR the first time since the world began, we are to have a weekly bee journal, and I presume it is in the hands of many of you by the time this reaches you. The first No. makes a very creditable appearance, and as it will be quite a task for friend Newman to get up such a one every week, shall we not turn in and give him a lift, in the way of subscriptions? If I am correct, a sample copy will be mailed on application.

THE PARLOR CALENDAR CLOCKS.

WE can furnish the calendar clocks, made by Seth Thomas, eight-day, making calculations for leap year, all by simply winding the clocks once a week, for $7.50 each, if 100 of our friends want one. These clocks are just such as we sold a few years ago for $15 each. Perhaps I can get them for that price, if not as many are wanted. It will be best to have them shipped direct from the factory, in Connecticut. You can simply give your names on a postal, until we see how many will take one. They will cost me $6.65 each, spot cash, at the factory.

MR. GRAY has greatly improved his machine for making the all-in-one-piece section, and after it is painted and striped up it looks so handsome we have decided to have it pictured, together with all the machinery for making sections, such as cutter-head, gang of saws, planer, etc., in our next No. As these machines are adjustable, so that they can be used for making all manner of light wooden boxes, they will be a profitable investment in any locality where basswood or other nice white woods are plenty. Our smallest steam-engine will run the whole set nicely.

IN answer to several inquiring friends, I would reply that I have received the circulars sent out in regard to the stingless bees of South America, but am not favorably impressed with the scheme. Even though Mr. Hawley be a conscientious man, I can not but think it will be a mistaken kindness to send him money in the way he proposes. We have a subscriber in South America, to whom I have sent the circular in regard to stingless bees, and we will report as soon as we hear from him. If any one feels disposed to go after new bees on his own hook, as did our friend D. A. Jones, let him go, and we will buy his queens after he gets them here alive. If he has not the means for making such a trip and standing the loss, if it prove such, he is not a suitable person to undertake it.

IN-AND-IN BREEDING.

SOME of our friends are fearful that their bees will suffer from the above cause, if they do not take pains to change their stock often. While I am glad to send you queens when you need them, I do not think any one need trouble himself much on this point, when we take into consideration the great distance that drones and queens fly, to meet each other. This is proven beyond question, by finding Italian blood miles away, very soon after they are introduced into a section. At the same time, I do not doubt but that the many good reports from hybrid stocks are the result of a fresh strain of blood given to both races.

IN friend Dadant's article of last month, the word "ring," applied to yellow bands of the Italians, was twice printed "wing." I read it over, and knew what word was intended, but, by some fatality, failed to see the "w" where an "r" should have appeared. Friend D. should have a little charity when he reflects (if he ever does reflect in regard to the matter), that, like the illustrious Horace Greeley, his handwriting is not the easiest in the world to "unravel." The point, that the Italians look darker in the fall when they are filled with dark honey, is a new idea, and I think one we should take into consideration. You see, if you want your Italians to look their very prettiest, just feed them some very white, transparent honey while you are exhibiting them. Granulated sugar syrup will be just the thing; then put them on the window, and you will have "transparent bees." Thanks, friend D., for starting us right.

SINCE my editorials in regard to Dr. Chase's receipt-book, I have had the opportunity of hearing from another side of the matter. Mr. R. A. Beal has acknowledged the mistake of his clerk, and sent me a copy of the book with the patent-medicine advertisements left out, to recompense me for the money I was " out " in the transaction. Chase and Beal, it seems, have had serious business differences, and the result is, that there are two different " Dr. Chase's" books. Taking a standpoint from either side, it would seem that either party has been greatly wronged by the other, as is often the case with similar troubles. Perhaps none but God knows just where justice lies. As both seem to be fair, honorable, and conscientious men, I would recommend to them to choose mercy, rather than think so much about justice, and certainly go so far as to decline ever more speaking unkindly of each other to any one, no matter what the circumstances may be. As for myself, if friend Beal will forgive me, I will try once more to have more charity for my fellow-men, before I criticise again.

P. S.—I am "awful" glad the medicine advertisements are left out, but I ain't going to say anything about it.

SELLING RECIPES, OR WAYS OF DOING THINGS.

KNOWLEDGE is comparatively free nowadays. A comprehensive treatise on almost any of the trades or industries is sold for a dollar, or a little more, and the time has passed by when people consider it right or honest to ask a dollar for some secret, written or printed on a single leaf, with a promise not to communicate the great secret to any of the neighbors. Nearly all our shops and manufactories are open to the public, and if you wish to go in and see how a thing is done, you can do so at pleasure. If this is not entirely the case, it is getting to be more and more so every day. The time of paying five or ten dollars for a recipe for bee-feed, or to make artificial honey, has passed by; and one reason for it is, that every recipe of that kind that has come before us has proved a fraud and a swindle. I have, as you know, paid money for these recipes several times, and afterward printed them here; but so far every one of them has proved to be well known, and in fact the greater part, if not all, that have ever been offered for sale, are given in Dr. Chase's " Receipt Book." Now, my friends, if I stop here will you not, you who have offered to sell secrets for a dollar, etc., think better of it, and withdraw your circulars and advertisements? I do not like to be harsh, severe, and personal; but in behalf of our A B C class, who in their honest enthusiasm are ever ready to send their hard-earned dollars, I shall have to speak out, if it is not stopped. Every important discovery will soon be public property, without the necessity of each one sending a dollar for it.

WHAT SHALL WE DO FOR BEES THAT HAVE DYSENTERY, OR ARE STARVING?

As so many bees are dying from what seems to be the effects of poor stores, we will try to help the sufferers furnish candy in 1-lb. bricks, made of pure granulated sugar, for 13c per lb. The same, with ½ lb. of flour to 4 lbs. of sugar, 12c per lb.; or with 1 lb. of A grape sugar, 3 lbs. granulated, and ½ lb. flour, 10c per lb. Any of the above I consider safe for feeding bees in winter. If you wish the bees to raise brood, you must have that containing flour, unless you have a surplus of pollen in the hives; in this case, I should prefer it without the flour. I do not know which of the two latter is the better one—you will have to test the matter by experiment. After the bees are flying, say in March or April, you can use one-half, three-fourths, or all grape sugar, if you choose. Now, before you order it by mail or express, please figure out the cost, that you may not be disappointed. Unless you order 25 lbs. or more, and have it sent by freight, it will, as a general thing, cost you more than to buy your sugar at your groceries and have the candy made at home. These candy bricks, laid right over the cluster, and then well covered up with chaff (some coarse bagging or burlap first, of course) is the only remedy I can suggest to cure the dysentery. Of course, the whole hive is to be packed, if the bees are not already in chaff hives. Do not attempt to save them by carrying in-doors, unless you can put them in a dry, dark cellar, where it never freezes. If you can not do this, give them the candy outdoors, and let them alone. If the cluster has got weak in bees, double them up until there is bees enough to warm up the candy. If *very badly* affected, I would take away all their honey, and put them on empty combs, with the candy over them. It is better to put the candy over them, during a moderately warm day; but if they are in danger of starving, the hive can be opened during almost any weather, without harming them seriously. If the colony is very weak, and you have no more to put with them, it may be better to give them only a small part of a brick, say an ounce or so at a time, and then more as they use it faster. Will you please report how this candy works, as I am very anxious to save the bees, and to save you from loss as well?

Our California honey travels so slowly that it has not yet reached us, though shipped as long ago as the 8th of last November.

The North-Eastern Bee-Keepers' Association of New York, meet in annual session at Utica, Feb. 2, 3, and 4 1881.

We start the year with 2612 subscribers. Please accept thanks for so many, my friends, after so poor a honey season. Last year at this time we had 3444.

No more premiums for subscribing early; but you can secure any of the counter goods as premiums by noting the rates to clubs, on first page of reading matter.

The Italian bees are at length introduced into New Zealand! Fresh water was supplied them daily, and they came through as fresh as just caged; so we learn from the New Zealand *Standard* of Sept. 11th.

As the honey season soon opens in the South, no more discounts will be made from our price list; but we shall watch every opportunity of lessening the price of any article in it, as soon as it is possible to do so.

THE WATERBURY WATCHES.

Over two gross of these watches have now been sold, and the number that have been returned are very few indeed, compared with what would have been the case with any other watch of a moderate price that I have ever handled.

I do not know whether sections will be $5.00 per thousand or more, after this month. It will depend on what those who make them decide in regard to the matter. As our own make can be either nailed or glued, so as to make a most rigid box, for those who want such, we think them rather superior to those made with the V-shaped groove.

Our friend Forncrook offers sections for $5.00 per thousand, during this month, and our friend Lewis, of the firm of Lewis & Parks, comes on with the same proposal. Now, not to be behind, we have determined to follow suit; *viz.*, furnish any section smaller than 5x6, during the month of January, for the same price. Those of you who have paid us more for sections to be used next season, can have the money repaid by making application. This price is so extremely close that it cuts off all chance of wholesale. We have an immense pile of seasoned basswood, and with our new machines I think we can furnish you the neatest all-in-one-piece sections you ever saw.

Our lunch room seems to be a decided success. With hot steam at her command, one of our girls served 22 hungry people in less than two hours, and washed and put away the dishes. Our bee friends who come to see us, can now, after visiting all the different rooms, take a seat with us at the noon service, and help to sing out of the Gospel Hymns; then, if so disposed, adjourn to the lunch room, and refresh the "inner man," and all without going out of the building. Friend A. Froscher, of LaGrange, Florida, supplies us with the most luscious Florida oranges, which seem to be one of the chief attractions to visitors to the aforesaid lunch room.

The counter store, as it is now arranged by the ingenuity of Mr. Gray, really reminds one of the collections of curiosities from all parts of the world that was to be witnessed at the Centennial, and during these holiday times the crowds of visitors that filled the room from morning until night, has helped to keep up the illusion. More than once have I knelt in that room at night, after all were gone, and thanked God for having blessed this project too, until it has gone far beyond what I ever dared to hope it would. One great secret of the success of it is, the scrupulous neatness with which Eliza keeps every thing. The floor is mopped almost every morning, the counters thoroughly dusted with a *pair of bellows*—what do you think of that idea, housekeeping sisters?—and by the time customers begin to come, every one looks happy, because of the order, neatness, and cleanliness found everywhere.

My friends, I had no idea that so many orders would be sent in for our little book of the Home Papers; and when I said we would try to have it out by Dec. 1st, I did it without thinking any one would be greatly disappointed if they did not get it quite so soon. It seems I have been a little mistaken in two things: All my books before have been printed from types; but either electrotypers work slowly, or ours has much work ahead. The plates of the book were promised yesterday. When they come, our big press will turn the books out in a hurry. My other mistake was in not thinking so many would want the little book by the tens and fifties, even before they had seen a copy. I am really afraid you will feel disappointed when you see it. M. will very soon commence setting the type for Part Second. May God bless the little book, and you in your separate homes, as it reaches you.

MARRIED.

FOSTER—ROCKWELL.—At the residence of the bride's father, Thursday, October 28, 1880. Mr. Oliver Foster, of Mt. Vernon, Iowa, and Miss Maria Rockwell, of Caldwell county, Missouri.—*Mt. Vernon Hawkeye.*

May the Lord ever be with you and your fair partner in life, friend F.!

Our Black List.

This department differs from Humbugs and Swindles, in giving the names and addresses of persons who, although they do not advertise, obtain goods by making promises which they do not keep, and, not only that, but they do not answer postals or letters when written to. To avoid accidental injustice, no one's name will be given here before we have ourselves repeatedly tried to get a reply from him, and, at the same time, have ascertained from his P. M., that he is a resident of the place, and, in short, have done every thing in our power to prevent this list from growing larger. Besides all this, an additional warning will be given each delinquent by sending him a printed copy of this list, before his name comes out publicly. Those who willfully take another's property without equivalent, and who deliberately and purposely do wrong, we all wish to be warned against, and it is only such we mean to include here.

D. Berry, Mansfield, Richland Co., O.
J. W. Blanton, Paris, Henry Co., Tenn.
J. F. Kramer, Clearfield, Clearfield Co., Penn.
A. J. Clark, Chatham Village, Columbia Co., N. Y.

Those persons named below claim to have sent us money, which we have never received. On the strength of their claim, we have sent the goods, asking for half price, and after writing them repeatedly, they fail to settle either by sending half price or returning goods at our expense.

R. R. Higgins, Bentonville, Adams Co., O.
M. S. Kirby, Fredonia, Chambers Co., Ala.
G. Adney, Knoxville, Knox Co., Tenn.

WANTED.—A good, sturdy, sober, industrious man, who is well posted in Bee Culture, to take charge of an apiary at Omaha, Nebraska. To such a man, good wages will be paid.
1-2 ISAAC EDWARDS, M. D., Omaha, Nebraska.

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DUNHAM

Comb Foundation!

In regular-sized sheets, 10x11, 8x16½, 12x18,

25 lbs. or less...........40c	50 to 100 lbs..........38c
25 to 50 lbs..............39c	100 to 200 lbs..........37c

Add 10c per lb. for thin fdn. for surplus honey; 5 per cent discount if ordered before March 15. Send for circular of Bee-Hives, Honey-Extractors, and Smokers. Address F. W. HOLMES,
2 Coopersville, Ottawa Co., Mich.

WANTED.—A good steady young man who is thoroughly posted in Bee-culture, to take charge of an apiary; must produce good reference as to his qualification as an apiarist. Address
2d W. G. CRAIG, Claremont, Nodaway Co., Missouri.

1881.— —1881.

Italian, Cyprian,
AND
HOLY-LAND QUEENS!

Single Queen, Tested............................ $2 00
" " Untested (laying)............... 1 00
Sent by mail and safe arrival guaranteed.
8 Frame Colony 6 00
3 " Nuclei 3 00
2 " " 2 50
Safe arrival guaranteed by express.
Address W. P. HENDERSON,
1-6inq Murfreesboro, Ruth. Co., Tennessee.

BE SURE

To send a postal card for our Illustrated Catalogue of

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Before purchasing elsewhere. It contains illustrations and descriptions of every thing new and desirable in an apiary,

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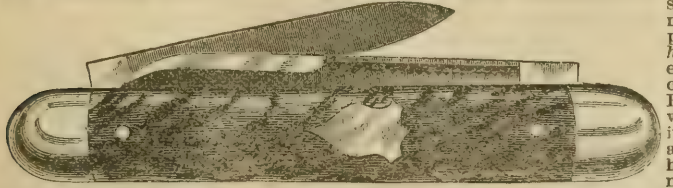

show here a new knife, No. 132, metal ends, strong blades; price, postpaid, 60c. Our goods are *hand-forged* from *razor steel*, every blade warranted, and exchanged *free* if soft or flawy. F. H. Day, Wilmington, Del., writes, Jan. 12:—"After receiving the knife I honed it down to a fine, keen edge, and tried it on hard, dry white-oak; the edge neither turned nor broke, which is more than I can say of any other knife I ever owned." We expect to build up our trade by selling GOOD GOODS; will you help us? Our extra-heavy 2-blade, made for farmers and mechanics, is the best knife in the market; price, postpaid, 75c. Boy's knife, 25c; ladies, 1-blade, 25c; 2-blade, 50c; Gent's 3-blade, $1.00. Extra strong *Pruner*, every blade tested, $1.00. Our hand-forged butcher-knife, 6-inch blade, postpaid, 50c. Illustrated list of knives, razors, and scissors, sent free to any address.

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1881

1881

Bred from imported mother. Safe arrival and satisfaction guaranteed. Send for circular. Untested Queens in May and June, $1.50. July and after, $1.00. Tested Queens, May and June, $2.50. July and after, $2.00. Select tested, $3.50.

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In April, - - - - - - -	11 francs in Gold.
May and June, - - - - - -	10 " "
July and August, - - - -	9 " "
September and August, - - -	7 " "

Queens which die in transit will be replaced only if sent back in a letter.

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The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan. 1881. Will guarantee safe arrival of every No.

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Supplies for the Apiary. Comb Foundation a specialty. Being able to procure lumber cheap, I can furnish Hives and Sections very cheap. Send for a circular.

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In the South for the
MANUFACTURE AND SALE OF
Bee-Keepers' Supplies
SIMPLICITY AND
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THE NEW ALL-IN-ONE-PIECE SECTIONS!

Having purchased from A. I. Root a machine for making the sections, I am ready to supply them in any quantity.

Comb Foundation, made of pure yellow wax, and worked on shares, etc. Honey and Wax-Extractors; Knives, Bee-Smokers, etc., etc.

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All bred from imported mothers of my own importation. Dollar queens, ready April 1st, $1.10 until June 1st; after, $1.00.

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THE CARSON CITY APIARY

and Supply Factory, consisting of 150 colonies of pure Italian Bees, one 10-horse boiler and engine, new and complete, with all machinery necessary for manufacturing hives, crates, sections, etc. Dunham fdn. machine and other implements too numerous to mention. Business been running 5 years. Local trade, $2500 per year. A bargain.

Address— HIRAM ROOP,
2d Carson City, Montcalm Co., Mich.

Also, a Beautiful Farm of 75 acres, with No. 1 buildings included, if desired. Will not exchange for other property. Cause,—I have lost the use of my right arm.

GOOD QUEENS, only 80c. Send for circular.
2-3d E. A. THOMAS, Colerain, Franklin Co., Mass.

RASPBERRIES FOR SALE.

	per doz. by mail.	per 100 by exp.	per 1000
Doolittle, - - - -	30c	$1 00	
Clarke's Red, - -	30c	1 00	
Mammoth Cluster, - -	40c	1 50	
Davison's Thornless, -	30c		
Ohio, - - - - -	40c	1 50	$8 00

Ohio is one of the best; will yield a third more than any berry I know; is very firm and large; one of the best for drying; begins to ripen about the time of the Doolittle, and lasts till after the M. Cluster. Will pick as much as any of the varieties at a picking. It is equal to the Gregg, if not better. If by mail, add 20c per doz. J. IRVIN JOHNSON,
2-4d Box 405, Palmyra, Wayne Co., N. Y.

WANTED.—By a young man, a place to work in an apiary. Ample experience in handling bees and rearing queens. Good references.

Address for one month, C. SHERRICK,
2d Care Mo. Medical College, St. Louis, Mo.

28th Year---65 First-Premium Medals and Diplomas.

Send postal card with name and address for my new illustrated Circular and Price List containing valuable information to all bee-keepers. *Sent free.*

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Successor to the late Richard Colvin,
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Send 15 cents to **NATIONAL FARMER CO., Cincinnati,** and get by mail **"What 20 Persons (noted for their Great Success in Raising Turkeys and Chickens) Have to say."** Reading what these experienced persons have to say will give one more information how to be successful than the reading of any Dollar Poultry Book. 2-4

HEADQUARTERS FOR

PURE ALBINO AND ITALIAN QUEENS AND COLONIES for 1881. As I make queen-rearing a specialty, I guarantee to those ordering from me just what they bargain for. Circulars free. Address D. A. PIKE,
2-4d Box 19, Smithsburg, Washington Co., Md.

HONEY-RACKS, NEW KIND. Circular free.
2-3d E. A. THOMAS, Colerain, Franklin Co., Mass.

1881 ITALIAN QUEENS! 1881

Tested Queens........$1 50
Warranted Queens.. 1 00
Cyprian Queens, untested 1 00

As most all the Dollar queens I sold last year were pure, I will warrant them this year.
J. T. WILSON, Mortonsville,
2-7d Woodford Co., Ky.

FDN.! NEW MOLDED FDN.!

Best in the market. Only try it. Samples free.
New machines, $5.00. OLIVER FOSTER,
2d Mt. Vernon, Linn Co., Iowa.

COMB Foundation Machines from $1.00 to $5.00. Comb Fdn., less than 5 lbs., 40c; over 5 lbs., 35c; over 50 lbs., 34c; over 100 lbs., 33¼c. Price list free. Italian queens from Imp. mothers, $1, ready in April.
2tfd JOHN FARIS, Chilhowie, Smyth Co., Va.

KIND WORDS FROM OUR CUSTOMERS.

My nippers came all right. They look to me cheap at a quarter, when only 5c is the price.
G. H. O'BANNON.
Dresden, Green Co, Ind., Dec. 28, 1880.

I was fairly delighted when I opened the box. Oh that nice little rule, only 10 cents! and the plane, spring balance,—in fact, every thing was more than I expected for the money. J. M. ENGLE.
Morristown, Shelby Co., Ind.

The watch is at hand, and a very nice little watch it is. It is a real nice, neat, and clean little timepiece. Thanks for promptness. The watch pleases and suits the boy exactly. E. J. ATCHLEY.
Lancaster, Texas, Dec. 28, 1880.

I bought your A B C a few months ago. I have read and re-read it until I have it all, or nearly all, by heart. JOHN G. FOX.
Middle River, Madison Co., Iowa, Jan. 7, 1881.

One word for the Home Papers: We are without a pastor at our church, and you have no idea how far they go toward filling the blank.
Moberly, Mo., Jan. 10, 1881. J. M. EPPERSON.

You beat the world sending things nice. I wish you were a little nearer, so that we (that is, wife and I) could order of you all that we have to buy.
Peru, Ill., Jan. 18, 1881. GEO. PERRY.

Please send us another 15-cent thermometer. My wife claims this one for her flowers.
A. P. HARTWELL.
Medora, Macoupin Co., Ill., Nov. 27, 1880.

GLEANINGS and goods came to hand much sooner than we expected, and were more than satisfactory. How they can be gotten up so cheaply, and sent 1200 miles by rail and 100 by stage in five days, is yet a mystery. M. C. SWAN.
Mason, Mason Co., Tex., Jan. 6, 1881.

Since I wrote you, I have been visited by a scientific friend, who has used one of your Waterbury watches for more than a year, and likes it first rate. That principle of winding up without the bother of a key is nothing less than splendid. SELAHAMMAH.
Fall River, Mass., Jan. 7, 1881.

I presented to my *little cousin* the watch you sent, and he thinks with myself that it is quite a treasure for so little money; he and his father compare their timepieces every morning and night, and his is always just right. His father's may be a little too fast or too slow, but his Waterbury, as he calls it, is just right. AUSTIN M. MAGEE.
Cooper's, Chilton Co., Ala., Jan. 17, 1881.

Please find inclosed one dollar for GLEANINGS for 1881. The house has got so accustomed to the ring of your voice, we couldn't well do without it now. The children all talk of Mr. Root as if they knew him. The good wife joins me in wishing yourself and family the compliments of the season.
A. B. HARRISON.
Walnut Creek, Contra Costa Co., Cal, Dec. 11, '80.

[May God bless the good wife and children, friend H., and yourself too, for your very kind words, which I can not but feel are certainly not more than half deserved.]

The "knifes" arrived in good condition, and one "childer" has been made happy with one of them. I once bought a pair of "specs" for 25 cents, which I thought was "'mazing" cheap; and, not believing you obtained yours on the ready-made, "stolen-broom" principle, I can hardly conceive how or where you find them to sell for a single dime. Topsy, of "Uncle Tom's Cabin," when she declared that she never was born, on being inquired of to know where she came from, said that she "spect she growed;" and perhaps you grow "specs" out there on the banks of the pleasant Ohio. SELAHAMMAH.
Fall River, Mass.

I have been carefully examining the contents of your A B C book, and find that in it is comprehended the whole alphabet of bee culture. During half a century I have had a practical knowledge of bee-keeping, and I have studied about all of the bee-books by American authors, from that of J. M. Weeks, of Vermont, to the most modern works; besides, I am acquainted with most of the European books that treat on honey-bees. Were I now to select a treatise on bee culture to put into the hand of a new beginner in that branch of husbandry, I should unhesitatingly take a copy of the A B C.
C. J. ROBINSON.
Richford, N. Y., Jan. 14, 1881.

RELIGION AND BUSINESS.

I wish to say, I like GLEANINGS, and especially your Home Papers. I fully approve of mixing religion with all our business matters. I do not believe that we have any right to engage in any business in which we can not sincerely ask God's blessing upon it. And now, friend Root, I want to say right here, that it is by asking and receiving a blessing from God, that I have succeeded so well with my bees, for I am an old man, and in poor health, and God knows all my needs and hears my cries; and blessed be the name of the Lord! Go on, brother, doing good in the name of the Lord; trust also in him, and verily thou shalt be blessed.

DENNIS GARDNER.

Carson City, Montcalm Co., Mich., Jan. 8, 1881.

CHARITY.

Please send price list, and oblige one who learned to love you for your "broad charity." Sir, the leading theme in the Devil's programme is selfishness, while that of the pure in heart is "a broad charity to all," with love to God and man. Many thanks for kind, comforting words. J. H. RODERICK.

Dodd's City, Fannin Co., Texas.

[Many thanks for your good opinion, friend R., but you do me more than justice. As I kneel and ask to be shown my faults, it comes to me day by day that a lack of charity is perhaps my greatest and most grievous sin; and, if I am not mistaken, there are those whose eyes meet this page to-day who *may* be shut out of the kingdom of heaven by this same failing of mine, coupled with my professions.]

I am so glad to read of one walking in the same path as myself, in so many respects. Yes; we ought to have the "bell rung" when we talk so ugly. I have sometimes wished to be struck dumb until I could talk just as I ought. When calmness comes, I think, pray, and ask forgiveness, and heartily desire to be set free forever, and determine to strive harder, and ask for God's help. But another storm will come soon, and at a time when I am not ready, and here goes again. Is this our weakness that we can not strengthen? Shall it always be thus? Blessed God, help! J. H. RODERICK.

Dodd's City, Fannin Co., Tex., Dec. 25, 1880.

[May God bless and help you, friend R., for confessing your weakness. It helps me, and I am sure helps us all, to know that some other one is struggling for the right, and is sorry for his past weaknesses.]

Inclosed find $1.00 for GLEANINGS another year. It is of more benefit to me spiritually than any thing I can find for the money invested. "They that do good here, are rich in good works, ready to distribute, and willing to communicate, lay up in store for themselves a good foundation against the time to come."—(I. Tim. 6:18, 19.) Those who, out of compassion, do works of love and mercy to the poor and needy, though it be only to the least of the brethren of Jesus, shall receive in return a rich reward in eternity; for the Lord will reward them for these things, as though they had done them to himself; and should they give to drink but a cup of cold water in the name of a disciple, they shall in no wise lose their reward. The exhortations, and words of kindness which appear in GLEANINGS may be the means of converting sinners, or at least one soul may be saved, and that is worth the whole world; for what profit shall we have if we gain the whole world and lose our soul? or what shall we give in exchange? Nothing; lost—lost forever; lost. God help us to rescue the perishing. CHAS. Z. DENNES.

York, Pa., Dec. 20, 1880.

Your postal of the 3d inst. at hand, crediting me with a balance of $1.00. You are a queer *genus homo*. Your honesty is almost painful. I thought I closed up accounts with you some time ago. Now, my dear sir, I really do not wish that dollar at all. I suppose it is for the queen I shipped back to you, and which died on your hands. Do me the kindness to keep it, as I can not bring my conscience to think you owe me any thing. This is certain, Mr. R.: You are the queerest specimen of a business man I ever had any dealings with (I speak frankly;) but I think I would like you if I knew you personally.

My GLEANINGS subscription I look upon as a good investment. I take others, but there is some thing in the smack and general "git-up" of your paper that I particularly like. If you will have your way about the matter, you can prolong GLEANINGS another year; but I would prefer you to pocket the cash and strike a balance line between our accounts.

Freehold, N. J., Jan. 8, 1881. L. C. LOCKWOOD.

[Many thanks, friend L.; but I am sure you do me more than justice. My rule, to be followed in all business transactions, has been to have each one so that that dearest and best Friend, whom I hope and trust is constantly by my side, may not be dishonored. And now, my friend, there is a great moral just here: You felt that my honesty, as you are pleased to term it, was singular, while others whom I have treated in the same way, and by the same rule (as near as I in my imperfections could do it), have been greatly displeased. Do you not see how different are people, how we differ in opinion, and how differently we see things?]

I want to have a little talk. In the first place, I want to thank you for the Homes. Before I commenced to read the Home Papers I could not find any thing to interest me in any religious papers or books; but since I have read the Home Papers I not only take a deep interest in them but also all religious news. It is pleasant to know a man who can put his trust entirely in God. How I wish I could! I think I am learning.

In reading friend Heddon's letter on "bee poisoning," I was reminded of a circumstance which occurred while I was looking at my bees this fall. On removing the cover I noticed the bees putting their stings in and out. I remember I called our boy at the time to come and look; and on examining them closely we could see drops of some clear liquid on their stings. Neither of us felt any noticeable effects from the poison which the bees were evidently spilling.

I advise you to get a pair of nice slippers. They look nice; they are comfortable, they do not spoil the carpets, and you can move about the house with them, without making any noise. Although our dining-room has nothing better than a rag carpet on the floor, mother is not pleased if we do not leave our big boots in the kitchen, and put on our slippers in the evening. E. GRAINGER.

Deer Park, Ont., Canada, Jan. 13, 1881.

[Thanks for kind words, friend G. The phemomenon with the bees is nothing unusual, and I do not think the poison usually affects any one in perfect health. Your mother is right, and may God bless her for her kind care in teaching her boys and men folks neat habits. I always wear light shoes or boots in the factory, and if I go out on the grounds when it is muddy, I wear rubbers. Sometimes I forget, and wear my rubbers in the sitting-room; and, if I am not mistaken, my wife will thank you for your timely reproof. Are there any other wives among our readers who feel the same way?]

CIRCULARS AND PRICE LISTS RECEIVED.

From A. E. Manum, Bristol, Vt., a 32-page price list of supplies for bee-keepers.

Salisbury & Caldwell, Camargo, Douglas Co., Ill., send us a postal-card circular of bees, queens, fdn., etc.

A. J. Davis, Anderson, Madison Co., Ind., sends a neat one-page circular of bees, queens, honey, fdn., etc.

E. A. Thomas, Colerain, Franklin Co., Mass., sends a very nicely printed 4-page circular, offering bees, queens, apicultural books, etc.

A 12-page, map-fold circular and price list from Frank L. Dougherty, Indianapolis, Ind., manufacturer of and dealer in the usual run of apiarian supplies.

An 8-page circular and price list from the Olivet Apiary, Olivet, Mich., A. D. Benham, proprietor.

James Heddon, Dowagiac, Mich., sends quite a complete 20-page circular and price list of bee-keepers' supplies.

The programme of the 11th annual convention of of the N. E. Bee-keepers' Association, to be held in Utica, N. Y., Feb. 2, 3, 4, is a well-printed sheet. Around the programme proper appear eleven ads. of our prominent apiarists and honey-dealers.

F. A. Salisbury, Geddes, Onondaga Co., N. Y., sends a 20-page price list of apiarian supplies.

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES AND HONEY, AND HOME INTERESTS.

Vol. IX. FEBRUARY 1, 1881. No. 2.

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.

Established in 1873.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POST-OFFICE. Clubs to different postoffices, NOT LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

No. 15.

QUEEN-CAGES.

DURING the past season I have received queens from several different breeders. Some of the cages were provisioned with candy, some with candy and water, and some with honey in a sponge. All the queens arrived in good condition, but none of the cages conformed to the *letter* of the law. I agree with friend Heddon in saying, "I can not help being mistaken sometimes, but I can and *will* help being dishonest enough to try to cover it up." For instance, last spring I thought we *must* have water in our shipping cages, and I used the tin bottles furnished by friend Root, until I saw the report in September GLEANINGS, of friend Viallon's candy, to be used without water, when I commenced sending queens without water, making the candy very soft. I have just left my writing, and "counted up" the queens that I lost last season, and out of 245 with water in the cages, 17 died; while out of 130, sent without water, only 6 died; and I think some of these perished from exposure to the cold.

I have an idea, in my "thinking machine," that I shall probably put in practice another season; it is possible that it has been tried and discarded, but I have never heard of it. Partly fill your cages with candy that is very soft, just about like molasses, and over this pour a coating of candy that is just hard enough to stay in its place and not "run." The bees can "drill through" this outer crust and "strike" water. Oh yes! one thing more: I have found that a light grade of yellow sugar is more moist in its nature, and seems to retain its moisture longer than does the coffee A sugar.

As so many of you are talking about

THE PEET CAGE,

I feel as though I must have my say. In the cage that I received last season, the candy was broken loose, and also broken into several pieces; but, strange to say, not a bee was injured.

You see the candy is poured against the wire cloth, and the least bending of the wire cloth is liable to loosen the candy; but I think this objection might, in some manner, be overcome. Last summer I introduced 14 queens with this cage. After confining the queen with the cage, I always left the colony undisturbed for two days, and at the expiration of that time I never failed to find the queen released and accepted. Somehow, without being able to say *just why*, I feel as though the cage, as an *introducing* cage, is all right,—*perhaps* a little ahead of other cages; but as a *shipping* cage, I do not *think* I shall like it.

I wonder, did anybody ever have any

BEES KILLED BY LIGHTNING?

A. C. Mosher, of San Marcos, Texas, writes that, a day or two after a heavy thunder storm, in which the electric fluid visited a house near by, and one stroke of lightning *sounded* as though it struck their own house, one of their strongest colonies of bees was found dead, with the exception of a very few bees. If the lightning did not kill the bees, friend M. would like to know what did.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

Friend H., the objection you make to the Peet cage has been remedied, or at least it was in those friend Peet has sent me, for the candy did not touch the wire cloth at all, but was kept from it by a thin piece of wood running under the candy. The many good reports from the cage, as well as yours, without question indicate that it has succeeded better, all things considered, than any cage ever before used as extensively as this has been. It is simpler to use, in the hands of a novice, and entirely cuts off the possibility of the queen taking wing when first let out, as has been the case with so many others, besides friend Merrybanks.

THE EARLY-AMBER SUGAR-CANE.

THE cane industry is taking a grand boom this winter. The past season has been a very successful one, although the yield has not been as great as some seasons. The quality has been fine, and the demand beyond our capacity to supply, and the prices for syrup have been such that the business has been very profitable. In Minnesota they have had the greatest success. They were supplied with ample machinery, and turned out a fine quality of sugar, and a refined syrup, which surpassed any thing in the sugar line I ever saw produced in the North.

Now is the time for parties interested in the cane industry to make arrangements for next season's operations. All who are intending to manufacture syrup next season should have machinery on the ground in the spring, or have it ordered at least so that your neighbors will feel safe in planting the cane. In regard to mills for crushing the cane, I have used three different makes. One was rigid, and one was arranged with rubber springs. But the one that I now use is the Adjustable Mill, made by the Madison Mfg. Co., Madison, Wis.

This is adjusted by weights and levers. They will do one-third more work with the same power than any mill I have ever seen in operation. The weights and levers are to the mill what the safety-valve is to the steam-engine.

The Early-Amber variety of cane is the best. The producer should be careful to select pure seed, and that which has the greatest vitality, as the seed has a great deal to do with the strength of the plant. Seed should be thoroughly tested before planting, by placing the seed in some favored location, and by laying a piece of thin cloth next to the seed. You can then at any time inspect the seed, and you can more accurately tell the result.

Soil. Cane gives the best results on a sandy upland soil; a clay soil gives a good quality, but not so large a yield. Generally speaking, cane will do well on any good wheat or corn land. W. P. CLEMENT.

Monticello, Wis., January, 1881.

We have now for sale, syrup from the Early Amber that is as thick as honey, and nearly as white, and our children, on seeing some of it brought home, thought of course it was honey. We retail it at 75c per gallon, or 7cts. per lb.—just half the price of honey. We have also in stock Early-Amber sugar that we sell at 7½c per lb. at retail, or 7c by the barrel. There may be a difference in taste in regard to this sugar; but for myself, I greatly prefer it to the Southern cane sugar for puddings, pies, or any place where yellow or brown sugars are used. That sugar can be raised at the North is now proven beyond question; and this sugar can doubtless be used for feeding bees, just as well as any sugar. As I have never seen any refined into the white coffee or granulated sugars, I presume a different process of refining is needed; but it will be done, without question, before another season passes. The taste of it is rather more like maple sugar than the sugars from the South.

MR. MERRYBANKS AND HIS NEIGHBOR.

FRIEND MERRYBANKS INVENTS A HIVE.

I TOLD you last month, that John set the hive down on the swill-pail when the bees started off. Well, the pail was over by the fence, near the pig-pen; and now I think I will tell you just how it came to be on that precise spot. They had just finished their dinner, and John's father sat down to smoke a pipe before going out to his work again. While he smoked, he read in his bee journal; and, although he knew it was past the time he should be at his work, he yielded to the temptation to sit a little longer, in spite of the suggestion from his good wife, that he might be needed, until he began to feel decidedly uncomfortable, and just in a mood for finding fault with somebody. As he stepped out of the door he passed John, who was rigging up a box for bee-hunting.

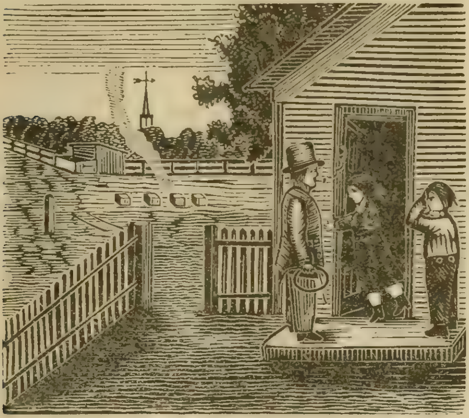
"John, have you fed those pigs this noon?"

Now, John was a very well-meaning boy, and would jump and run in a minute when his father or mother asked him to do any thing for them; but he had one very sad fault: he could never remember any thing very along ahead. He always would forget to feed those pigs, and it made very little difference whether they squealed loud enough to raise the roof from their pen or not, John never heard them, and rarely remembered to go and feed them, unless told each morning, night, and noon. Perhaps one reason was, that they were almost always squealing anyhow, and he had got used to it. Well, when his father asked the question, he was so used to saying, "Oh! I declare, father, I forgot it," that he said so this time, as a matter of course.

His father was a little out of tune, as you know, and, under the impulse of the moment, he gave him a cut with a halter-strap he had in his hand, saying,—

"There! take that, and learn to remember what you are told."

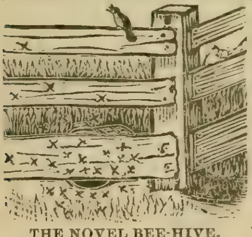
John went crying after the pail, but it could not be found. Come to think of it, he *did* feed the pigs, after all, promptly, just before dinner, and there stood the pail over near the pen, just where he had left it. So he came back to his father, rubbing his eyes, with the humiliating confession that he was not derelict in duty, but forgot to mention the circumstance, in time to avert the clip with the halter-strap. As John looked up at his father, and his father looked down at John, the situation was a little embarrassing for both parties. John loved and respected his father, in spite of his sometimes harsh ways, and always enjoyed being with him in any work or play. The father also loved his boy, in his way; and as he stood there with the traces of tears on his cheeks, he recalled to mind how very dutiful and obedient he had always been. In fact, there wasn't a better boy anywhere round about than his boy John, as he had often said, if it were not for his awful propensity to forget every commission, seemingly, that anybody entrusted to his care. Scolding did not seem to help the matter any, for he forgot again, almost before the words were out of his ears. I am a little inclined to think the father was then remembering how he used to forget, too, when a boy, and how earnest, kind words seemed to lift him up and make him strong, more than any amount of scolding. Should he confess to his boy that he had been hasty? and would he not think less of a father who should so humble himself? Is it really well to "own up" to your boy when you have done wrong? As the father meditated upon the consequences of weakening the boy's confidence in his wisdom and fitness to stand in the position of father, he also thought within himself, "Oh that I could learn to be more careful, and to have perfect command over that temper of mine!" He did not think, "God be merciful to *me* a sinner," but it seems to me it amounted to almost that.



JOHN AND HIS FATHER.

"Papa! John! The bees are swarming! don't you see them?" It was little Mary's voice; and, sure enough, the bees *were* swarming. The particulars of the event you have had already.

Well, after John got back from the woods with his bees still clustered on the limb, he gave them to friend Merrybanks to hold, while he went after the hive left sitting on the pail. The pail was over near the fence, and as the hive was lifted off of it, some stiff grass and weeds underneath it raised up so much as to upset it, and it rolled over against the board fence. Now, the bottom board of the fence was a rather broad one, and as the pail rolled against it, it fell with its mouth against this board in such a way that the pail was all closed, except a small opening at the lower edge. The picture will show you just how the pail lay against the fence. After the weeds had risen up back of the pail, it was obscured from view so effectually from the inside of the fence, that no one would have ever thought of there being a pail there; and, in truth, neither John nor his father ever did find the pail. After the excitement of bringing the bees home, John was not even as good as usual at remembering, and so it never occurred to him that the pail was down in the weeds just where it tipped over when he lifted the hive up. After he and his father had both hunted for it in vain, they gave it up; and when the latter went down to the grocery in the evening to get some more "tobacker," he bought a new pail.



THE NOVEL BEE-HIVE.

Now, one great reason why John's father was a poor man was, that he seldom took care of his tubs, pails, etc. When a hoop tumbled off, it was seldom put back and fastened; but the utensils and tools were mostly left out in the sun and rain until they fell in pieces, and then new ones were bought as a matter of course. His plea was, that it was more expensive to fix and fuss with old things than to buy new ones outright. Mr. Merrybanks did not agree with him, and they had often talked over the subject. Mr. M. even went so far as to make a new stave for a bucket, rather than to throw it away; and his plea was, that even if it was more expensive than to pay 15 cents for a new pail, it got one into a way of stopping things from going to pieces, and thus saving outlays to the amount of many dollars in a year. It was the same way with the tinware. A good tin pail at John's father's would often have the bottom rusted out in about two months, because the water was left standing in it, or it was left with just a little in, without being wiped out and turned over. Now, Mrs. Merrybanks had a way of taking care of her tinware, that I think I will have to tell you about. She did not buy the thickest tin pails and dish-pans, because she did not want heavy utensils to handle; but before each article was put to use, it was warmed slightly, and a little clean lard rubbed into all the seams, with a soft rag. This was then rubbed off with another clean portion of cloth, and the operations repeated at intervals, according to the way in which the article was to be used. The tin water-pail was thus dried and "greased" inside about once in a week or ten days, and the effect was such that the pail had been in use for years, and the bottom was not rusted even then. Mr. Merrybanks treated his sap-pails the same way; and even though they were made from light tin, they were bright and clean after years of service.

Now, a few days after that great swarming time we have mentioned, Mary and Freddie were at play in the lot adjoining. This lot was one where cattle were allowed to pasture, and the grass was eaten down closely. As they passed along opposite the spot where that unlucky pail tipped over, Freddie exclaimed,—

"Why! look'e here! Here are bees going out and in under the old board of this fence."

"They must be bumble-bees," suggested Mary, "and they have got a nest under there, I'll bet you."

"I'll bet you they ain't bumble-bees," said Freddie; "I guess I know bumble-bees when I see them, and these are real honey-bees, like my papa's."

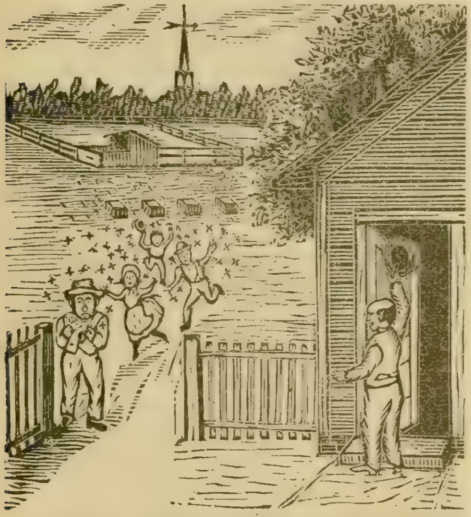
"Well, I know they *are* bumble-bees, for honey-bees don't ever go down into holes in the ground and grass as these do. My pa has got honey-bees too, just as well as yours."

John, hearing the dispute from where he was trying in vain to dig up the great weeds that had nearly swamped the potatoes, came to hear what it was about. Both children called out at once,—

"Say, John, ain't these bumble-bees?"

"Say, John, ain't these honey-bees?"

At this, John clambered over the fence; but the fence was poor and shaky, like the general surroundings; and as he jumped down, the fence was shaken so violently that all hands soon had a pretty fair prospect of knowing the disposition if not the kind of bees that inhabited that old pail and were pouring out from under the fence in a way that meant only "business." Discussion was dropped with a unanimity that would have done credit to a bee convention, and all hands cut for the house, laughing and screaming. Whom should they run against, as they turned the corner of the house, but Mr. Merrybanks, as jolly and rosy as he was when we last saw him rolling down the hill?



ARE THEY BUMBLE-BEES OR HONEY-BEES?

Friend M. hustled the children into the house, and the bees, after buzzing about the door awhile, buzzed back to their pail hive. Mary had a bee or two tangled in her flying hair, but these friend M. got out quietly, without even a sting, and John was the only one of the three who got stung at all. The bees that got out of Mary's hair, when found on the window, proved to be one-banded hybrids. Friend M. lighted a chunk of rotten wood, and after rigging out the different members of the family with sundry veils, the whole party cautiously approached the pail bee-hive. A little smoke was blown in at the entrance, and friend M. carefully turned the pail so that a view could be had of the inside. Sure enough, there was a good colony. They had evidently built the first comb parallel with the bottom of the pail, and the next one right by its side, and so on. The queen had commenced her brood in the center, and circled around so that their stores were above and at the sides. All were loud in their praises of these beautiful "wheels" of honey-comb and honey, except friend M. He stood with his smoking chunk of rotten wood in his hand, and gazed as if spell-bound. Mary first broke the silence,—

"I guess pa is studying up a patent bee-hive, made out of pails; don't you think he is?"

At this, John grabbed hold of friend M.'s other hand and exclaimed, "Oh Mr. M.! Mr. M.! it'll be half mine, won't it, 'cause I invented it when I lost the swill-pail?"

At this sally there was a loud laugh all around, and even John's mother joined while she suggested he would certainly make a great inventor some day, if every thing he lost or forgot turned out like the pail bee-hive. Little did any of the parties dream that morning that this same little incident, or perhaps accident, was eventually to make such a stir, not only throughout all Onionville, for that was the name of the place, but clear out into the outside world as well. As Mr. Merrybanks has promised us a description of the Wooden-Pail-Cracker-Barrel bee-hive, belonging to himself and John, for next month, I think I won't tell you any more about it now. It winters bees perfectly (even if they haven't a drop of honey), and costs only — dear reader, "Barney" says I have got to stop, for he can't squeeze another word into this number of GLEANINGS "no how."

IN turning over the great bundles of papers that come to me from all directions daily, I scarcely know from whom or why, I occasionally catch a glimpse of many good things. The following caught my eye this moment, from the Philadelphia *Christian Standard*:—

> Nothing can equal in power and influence a holy life. The influence may be silent, but it is mighty. Books and tracts may be read, and their instructions and advices and appeals may be disregarded; sermons may be preached, and their expositions of truth and their exhortations to repentance may go unheeded; but a Christ-like example, a quiet, blameless, beautiful walk in the path of purity, is, at least, more difficult to resist.

SOME one of my kind friends sent me a little book entitled "The Christian's Secret of a Happy Life," and by so doing he has conferred a greater favor than if he had sent me a thousand dollars (yes, a great deal greater, for the money would very likely have done harm; but the book will do good through endless ages.) May God's choicest blessing rest on the woman who wrote it, and all praise be to Him who put it into my power to call your attention to it. I shall probably make some extracts from it next month.

THE SPIDER PLANT, AND SIMPSON-PLANT.

I WOULD not advise any one to raise plants to sell, for last year's experiments abundantly proved that both could be raised in the open ground soon enough to get a good crop of honey. Of course, you will get better plants and an earlier yield, by starting them as you would tomatoes and cabbages, in the house, in a hot-bed, or even in the open ground, covered with sash, until all cool weather is past. We had several thousand raised in the latter way last season, and they bloomed nicely in the late fall months, when needed most.

MRS. COTTON.

ON page 571, Dec. No., I asked all who had complaints against Mrs. Cotton for keeping their money and not sending any thing, to write to the address I then gave. Well, in the Jan. No., page 47, I said very few had reported. The truth of the matter is, *no one* reported. All cases of that kind seem to have been adjusted before Mr. Holmes undertook to look into the matter. The only thing that now remains unsatisfactorily adjusted is the complaints of her customers that the goods she sent were not satisfactory, nor what one would expect from her advertisement. My way of fixing these complaints would be to refund such damages as they think they should have, or ask them to return the goods. Inasmuch as she is not the only supply dealer who has declined to settle with their customers in that way, she hardly should be classed with humbugs and swindlers on that account.

JOURNALS COSTING MORE OF THE PUBLISHERS THAN OF SUBSCRIPTION AGENTS.

THE OTHER SIDE OF THE QUESTION.

FRIEND ROOT:—I desire to talk in a friendly way to you and friend Jones, about what you say on pages 17 and 18 of Jan. GLEANINGS, and desire a space in the Growlery or elsewhere so to do. Friend Jones says, "You hit the nail on the head when you say, 'GLEANINGS is a standard article.'" Now, I wish to ask, "How has GLEANINGS become a 'standard article'?" First, by advertising it by the editor; and second, by its being advertised by subscription agents. Which has paid the better? We will let A. I. Root answer. Under date of Feb. 5, 1874, friend Root writes me as follows; "Our number is now 840, but we have paid out about $150.00 advertising, so that we are not making GLEANINGS pay as yet." Under date of Dec. 25, 1874, he writes; "If you don't stop sending us full price for subscriptions, we will revenge ourselves by swelling the amount on your credit page until we can put it out on interest for your wife and family. We should soon have a larger journal if we had a few more such friends." Again, under date of Oct. 2, 1875, he writes: "We really feel as if we owed you much for the subscribers you have been the means of our getting." Thus it will be seen that subscription agents paid the better in bringing GLEANINGS to a standard article. That was when GLEANINGS was in its infancy, and friend R. insisted, *at that time*, on our taking 50 per cent as pay for our labor in getting subscriptions for him; or, in other words, buying GLEANINGS at wholesale, and selling at retail. As 50 per cent was more than we wished to take, the next year we conceived the idea that we could help friend R. more by way of introducing his paper, if we gave all our subscribers 35 per cent of this profit, and also be a help to them by reducing the price to all such as would buy GLEANINGS of us. Thus we have worked up to the present time, and the many letters we have received thanking us for our undertaking has cheered us on, and helped smoothe over several losses we have sustained. Also, friend Root has expressed his thankfulness to us for helping him to a large circulation. But now GLEANINGS has become a standard article, and as many children forget, when grown up, the labor and kindness bestowed upon them in childhood by their parents, so friend Root apparently forgets the many friends who helped him in his time of need, and places them in a position where they will either lose all their customers, or else get no pay for their labor. If we place GLEANINGS to subscribers at 90c, and have to pay friend Root the said 90c (as he says we must another year) where will the $100 come from it cost us to print and get 4000 club lists into the hands of bee-keepers all over the land? If we put the price of GLEANINGS at one dollar, we shall get no subscribers, as they will then send to friend Root for them, just as we would go to any store if we wanted a watch, rule, knife, etc., if we could get them just as cheaply at the store as of friend R. And now we come to the

INCONSISTENCY OF FRIENDS ROOT AND JONES.

Friend Root refers us to counter store; that he there sells at a profit of 10 per cent, and has thus "builded up such a trade;" but he must have forgotten how he has told us, all along back, how, by buying large quantities at wholesale, he has been enabled to get the goods at from 25 to 50 per cent discount, so as to sell to us thus cheaply, thus meriting the approval and thankfulness of bee-keepers all over the land. How many 10 per cents do you think you would make, friend R., if some one of us should sit down and write to all the manufacturers you buy of, and tell them you were selling goods at retail for less than they were, and convinced them that it would be a benefit to mankind if they would raise their prices so that all parties would have to pay alike for their goods? And now, friend Jones, to carry out your theory (of "bringing the producer and consumer, publisher and subscriber, nearer to together, thus crowding out unnecessary middlemen"), suppose you sit down and write to all these men of whom friend Root buys, that their "wholesale price is too low," and thus cause a wail to be heard from Maine to California, and from Canada to the Gulf of Mexico, from those who have bought of friend Novice at the present low prices from his counter store. And Novice says, "AMEN! this is done solely to correct the inconsistencies you have mentioned." O consistency! thou art a jewel.

G. M. DOOLITTLE.

Borodino, N. Y., Jan. 11, 1881.

That is right, friend D.; speak out; all you say is true, and some more that you did not say is true also. When I wrote you those letters of thanks, you received the full price from each subscriber; when you spoke of working without pay or commission, I suggested (if I am correct), that it was not a good way to do, even among the best of friends, and I think so still. If I am not mistaken, GLEANINGS became a "standard article" while you and friend Heddon both were dealing clips at it and its editor month after month, through the *A. B. J.;* and it was during this term of years that you commenced sending circulars to all of its old regular subscribers, offering it to them for 75c instead of a dollar, if they would *buy of you.* Letters came to me, inclosing 75c, saying that they supposed the publisher was able to afford GLEANINGS at the regular advertised price, and if he could not, send the money back. Of course, we sent the money back; for if I should let one of our friends have it at 75c, and charge the rest $1.00, I should think it little better than stealing, and that, too, from the *best* friends I have. I might put it at 75c to everybody, and have no wholesale, but this you would by no means consent to, if you took subscribers.

Those who sell me goods for the counter store do not retail, as a general thing; and I have never heard one of them complain because I sold them too low. A bee journal is wanted year after year by a special class of men, and it is an easy matter to put a circular into their hands, just about the time they are ready to subscribe. Our friends across the ocean often commission me to purchase for them certain goods, and I can give them as low rates on every article as anybody else, with the exception of GLEANINGS; and it is a hard matter to explain to them,—in fact, it can't be consistently explained, why I, the publisher, charge them a full dollar, when it is advertised extensively at 85c. As I now see it, it is my duty to furnish GLEANINGS for 1882 as low as it shall be advertised in any of the subscription lists; or, at least, so near near it that my old friends and customers will have no reason to complain; at the same time, I wish to pay (and pay *well*) the friends who take the trouble to canvass thoroughly in the vicinity of their own postoffices. The first page of reading matter in each No. gives the terms for doing this. Friends are often made better friends after having had a plain, square talk in regard to differences.

◆

MY FIRST TEN YEARS OF BEE-KEEPING.

I HAVE been keeping bees sixteen years. Hoping that it may be interesting and profitable to some of your A B C class at least, I send you a short account of my first ten years' experience.

1. *How I got into the business.*

I often wanted to buy honey, but could get none, except once; I got from a farmer, who had brimstoned a hive, a few pounds in old brood-combs, half full of bee-bread. It was not very good eating, but we made the best of it. In the fall of 1864 I met a clergyman from the West who told me of the new methods. I bought Langstroth's book and studied it. I bought a hive of bees in March, 1875. I sent to Mr. Langstroth for a sample hive, and got a carpenter to make others, for which I paid $4.50 apiece. I read my book, and practiced what I read. In one year I had gone the whole round of dividing, taking honey, wintering, etc. By that time I had learned pretty thoroughly the theory and practice of bee-keeping, and was prepared to advance. My bees and hives cost me the first year $31. I got 80 lbs. of box honey, which I could have sold at 40 cts. per lb. I had four good colonies to winter, which I could have sold for $12 apiece. Had I sold out at the end of my first year, I would have netted $49 on the one hive.

Remark.—I feel very confident that, as a general rule, it is best for beginners to commence in a small way with a few hives and as little expense as possible; learn the business, test their own capabilities, and make the bees pay their own way. This would have saved many persons I know considerable loss and disappointment.

2. *Expenses, increase, and profits.*

The account I kept was a cash account. I did not charge the bees with my own labor, but with cash paid out for hives, queens, etc. Neither do I credit them with the increase, nor with honey used in my own family, or given to my friends and neighbors. This amounted to several hundred pounds a year, The cash account for ten years stands as follows:—

Year.	No. of col's.	Dr.	Cr.
1865	1	$31.00	$00.00
1866	4	32.00	00.00
1867	6	60.00	5.00
1868	13	80.00	125.00
1869	22	85.00	195.00
1870	31	58.00	326.00
1871	40	80.00	515.00
1872	34	15.00	363.00
1873	16	00.00	223.00
1874	10	10.00	138.00
	Total,	$451.00	$1890.00
			$451.00
Net profit in ten years,			$1439.00

Remarks.—After the prosperous year of 1871, I began to sell my bees, and to work out of the business. Had I continued the next three years to increase, or even if I had kept up the number of working colonies, the profits might have been much larger. I began to go out of the business just when I had gotten into a position where I could make it profitable. The profits for succeeding years were principally for surplus honey remaining over from 1871, and colonies and hives sold.

3. *How I got out of the business.*

1. For reasons I need not mention, I wanted to keep no more bees than would raise honey enough for my family and friends. I sold some colonies in the spring of 1872.

2. Until 1872 I wintered my bees successfully in a good dry cellar, out of the reach of the changes of cold and heat. That fall, owing mostly to carelessness, and in part to the fact that my neighbors had for some years wintered their bees so successfully in Langstroth hives on their summer stands, and without protection, I left my bees out unprotected. That was a severe winter. I lost over one-half of my colonies, and the other half was so reduced that it took them all summer to recover. Foul brood also made its appearance, and I lost several colonies before I got it exterminated. My neighbors lost nearly all their bees that winter.

FOUL BROOD.

3. In the spring of 1873 I began feeding up the 10 colonies left, to make them increase to fill my empty hives. One day in April I found a crock of honey that I had forgotten about. I divided it among the 10. After three weeks, when they all seemed to be prospering, on examination I found foul brood in every one of the hives. Then I remembered that the honey in the crock had been saved from hives destroyed by foul brood. I had intended to boil it before feeding, but forgot about it. Here was trouble—foul brood in every hive. What could I do? Previous experience had satisfied me that I could not save them without destroying the brood, and boiling the honey; and I was somewhat disgusted with keeping foul-brood honey. Most of the bees were old, and would not live long. I doubled up the colonies, putting them into three empty hives and removing them into the cellar to make them eat what honey they had saved before I would give them combs. I made a brush-heap, set it on fire, and emptied the contents of the ten hives into it, and set the hives away to freeze the next winter before they could be used again. After two days I brought out the bees, gave them clean hives and combs, which had been saved after the destructive work of the winter of 1872. In three weeks more, I found foul brood in every hive. Ah me! I had another fire. The three colonies were put into one hive, and placed in the cellar for four days, and fed a little. They did not get foul brood again, but died from old age before the young bees had increased enough to save the colony. Thus ended my first ten years of bee-keeping.

Remarks.—1. A man must mind his p's and q's if he does not want to make bee-keeping a failure.

2. Some years, bees will winter well out of doors in almost any hive. Most winters, when bees can fly occasionally, out-of-door wintering in chaff hives, or hives well protected, will probably prove the best. But in winters like that of 1872-'3, when the bees could not fly once from early in December until the middle of March, I am disposed to think there is nothing equal to a good dry cellar.

3. It makes me sad yet to think of the desolation which reigned in my apiary in 1874. I did not find it

so pleasant to be out of the business. I also found that I needed the recreation, the exercise, and the pocket-money my bees gave me. I am now trying to winter 50 colonies.

4. I have other experiences, which I can not put in this article.

Wishing a happy New Year and a prosperous business for 1881 to you and all your readers, I remain,—

Milroy, Pa., Jan., 1881. JOHN W. WHITE.

Many thanks, friend W., for your valuable experience, especially in regard to wintering and foul brood. I have no doubt but that many of us could furnish facts corroborative of the point you have brought out so strongly—the importance of care and thoughtfulness, year after year, if we would make a continued success of the business.

TOBACCO COLUMN.

I SEE you offer to give one of your smokers to any one who has been an inveterate slave to the use of tobacco, who will pledge to abstain from the use of it. I, perhaps, have been as much a slave to the use of it as any one, and if you will send me one of your smokers, I will pledge myself never to chew or smoke it again, or forfeit fourfold.

JAS. H. P. HENDERSON.

Covington, Ga , Dec. 17, 1880.

I have noticed your offer in GLEANINGS, to give a smoker to any person giving up the use of tobacco. I have smoked tobacco for 11 years, more or less; the last 4 or 5 years regularly. I am 27 years old; have been discussing in my own mind lately whether "to quit or not to quit," and have about concluded to quit. Send along that smoker, and away goes pipe, tobacco, and cigars for good.

L. E. BISSELL.

Ridgeway, Osage Co., Kansas, Jan. 6, 1881.

You sent me, by request last week, a sample copy of GLEANINGS, and in it I found a singular offer. To any one who will leave off using tobacco, you offer to furnish, free of charge, one of your smokers—he to have his choice. Now, I have been a slave to the weed for 18 years, although I am only 34 now; but I am going to take you at your word. I am not prepared at present; but if the smoker comes all right, I will subscribe for GLEANINGS. I want the large size Cold Blast. I am just commencing in the bee business. I am going into it more for the pleasure I may get out of it than for the profit. I shall want a queen in the spring. My wife says that the minute I begin the use of tobacco again, she will write and tell you of it; but I guess I have honor enough left to pay if I fail. E. A. EMMONS.

Tampico, Whiteside Co., Ill., Dec. 30, 1880.

I have got into my old path again, and have forgotten the many kind words you spoke to me while I was in Medina jail. Mr. Root, I wish I could be with you and learn to be a Christian; but I never can be a servant of the Lord as long as I live where I am. I have left off chewing tobacco, but still smoke some, and I hope you will forgive me for breaking my promise to you on the smokers, and I am willing to pay you for your smoker, as it has done me a great deal of good. Perhaps you have heard of my smoking the pipe; if not, this will let you know that bad company will do almost any thing. I should like very well to work for you in the spring, so I could get away from the comrades I have in this town. SAMUEL YOUNG.

Chatham, Medina Co., O., Jan. 20, 1881.

I am very sorry, friend Y., that you have gone back to smoking again, but I am very glad that you have come right out, and confessed it like a man. I should be very glad to give you work, and may be able to do so; but, friend Y., can I not impress on you that it is not to *me* you must look for help? I am but a poor weak erring mortal, and if you should depend on me alone, it would be like the blind leading the blind. Take your Savior as your friend, and you are sure to win immortal life in the end. If I am not mistaken, you have good Christian people all around you, friend Y., and you are holding a little aloof from them. Now, as you value my advice, friendship, or wisdom, go right straight next Sunday morning to your nearest church. Tell the minister, and the superintendent of the Sabbath-school that you are coming right along, and want to help in the Lord's work; and if you do not find it one of the happiest Sundays you ever spent, I do not know any thing about it. I know it will be hard work, and that you would rather do almost any thing in the world; but I tell you, we shall never get that golden crown unless we do some hard things. Just read this promise:—

> He that overcometh, the same shall be clothed in white raiment; and I will not blot out his name out of the book of life, but I will confess his name before my Father, and before his angels.—REV. 3: 5.

I am sorry, very sorry, but I fear I shall have to charge you with that smoker until you write me that you have broken off again. D. is just breaking off tobacco too; and if he sees you with a pipe in your mouth after you have once tried, do you not see how it may hinder instead of helping him in his new life. By referring to p. 571 of last year's volume, I see you were the first to accept my offer of a smoker; and now I am sorry you are the first one to be called on for payment for one.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

BEES were almost a total failure in this part of the country this year; no increase, and scarcely any surplus, and a good many light swarms went into winter-quarters.

JOHN NOBLE.

Eureka, Winnebago Co., Wis., Dec. 12, 1880.

I have lost 3 out of 7 swarms, and if this cold weather continues I shall lose all; then what shall I do? Nobody was looking for such a winter as this.

A. BIXBY.

Foristell, St. Charles Co., Mo., Jan. 12, 1881.

Our clover and other flowers utterly failed last summer, so that we had to *feed our bees in July and August*, to keep them alive. You may set down a large section of Illinois, under the recent terrible drought, among the growlers; I suspect you could buy out their bees for a tin whistle, if they have any still alive. J. B. TURNER.

Jacksonville, Morgan Co., Ill., Jan. 13, 1881.

POISONING BEES.

AN EXTRACT FROM THE LAWS OF OHIO.

FRIEND ROOT:—As I have seen considerable discussion in GLEANINGS of late in regard to the law protecting bees, and in regard to hives, poisoning, etc., I have just been reading a portion that is found in Ohio Laws, Vol. 68, page 87, which I think will fit the Klassen-Krock case pretty well. It reads as follows:—

> That if any person shall steal any hive, box, bee palace, or other contrivance containing honey or honey-bees, the property of another, of less value than thirty-five dollars; or if any person shall steal honey from any such hive, box, bee palace, or other contrivance as aforesaid; or if any person shall willfully and maliciously disturb, injure, or destroy any such hive, box, bee palace, or other contrivance containing honey or honey-bees; or if any person shall steal, or by any art, device, or contrivance, or in any manner whatever, decoy from any such hive, box, bee palace, or contrivance, any such honey-bees with intent to convert the same to his own use, or with intent to damage or defraud the owner thereof; or if any person shall, by any art, contrivance, or device, unlawfully and maliciously injure, damage, or destroy any such honey-bees by means of *poison*, or otherwise, every person so offending shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined in any sum not exceeding one hundred dollars, and shall be confined in the jail of the county not less thanten nor more than thirty days, and pay the cost of prosecution, and shall, moreover, be liable to the party injured in double the value of the property stolen, injured, or destroyed.

Now, friend R., I am a little surprised at the course you, and especially friend Wilkin, takes on page 8 of Jan. GLEANINGS, advocating the idea of poisoning property. I think friend W. has not looked at the laws of Ohio carefully. Of course, I do not sanction the idea of carrying a revolver, but I should think more of the man who would point a revolver at my face than one who would go behind my back in the dark and poison my property, which I think is one of the most heinous and meanest of criminal offenses. A. H. DUFF.

Flat Ridge, O., Jan. 8, 1881.

Tut, tut, friend D.! Did I say any thing that could be construed to encourage poisoning bees or other stock? I am very glad indeed to get the above law, and I am sure we all owe you a vote of thanks for looking it up. Now, you see, if friend Klasen had not had a pistol along with him, we should have had a "dead open and shut" on friend Krock, as the boys say. Neither *pistols* nor *poison* are according to the spirit of the Fourth of July in settling neighborhood differences, and so I would advise both the parties to shake hands and help each other fix up their bee-hives and grapevines. If they won't do it otherwise, I think it would be a good idea to have a "donation party" for both of them, to make up what they lost by being foolish.

UNDER THE BOX-ELDERS.

FRIEND NOVICE:—Situated under the shelter of one of the many beautiful little groves so common in northern Illinois, is the home of a plain gentleman, to whom I wish to introduce you and your readers. He is a bee-keeper with his other business, and to show you the style and tastes of the gentleman I will say, his cows are Jersey; chickens, Plymouth Rocks; bees, Cyprian and Italian; dog, black and tan, and his cat Malte. His home is an inexpensive one—neat and tasty. Around his dwelling is quite a number of box-elder trees of his own setting; and almost any hot afternoon in July or August you can find him seated in a large rustic chair under one of these beautiful sweet-scented trees, watching his bees and chickens, both of which are in plain sight. It is here we have met so often and had our bee talks, of which I may give you a synopsis; and it is here we will introduce—Mr. Duster, Mr. Root; Mr. Root, Mr. Duster. His neighbors say, the reason he was called by that name was because he could dust around occasionally so lively; but I think, upon due reflection, that the reason was, "because it was his name." Having introduced him, we will proceed to give some of his ideas on—

BOXES AND SEPARATORS.

"Well," said Mr. Duster, in answer to my inquiry, "I have used almost all kinds; I now use but three; viz., the 4¼ x 4¼, the Prize box, and Harbison section box. They all have their good qualities. You may think strange that I should name Harbison's in connection with the others. I have used the H. section box for several years. I do not make them of such heavy stuff as Mr. Harbison; I make them very light; bottom-piece nearly like Prize box—leaving, however, a wider space for bees to pass into the box.

"Let me say here that I have heard a good deal about section boxes. Well, I do not know of but this one of Harbison's, unless you call Adair's of ten or twelve years ago one. This Harbison box is *really* in sections, and I know of none other that is.

"I have for years prepared the box or sections in this way: Running a wax-guide on the top of every section, crescent form, and ½ inch in depth, and placing a piece of white comb in the center, and having at least one piece that would reach from top to bottom as a climber. I never used separators, and almost invariably the combs were straight and nice. There is another thing to be said for them,—you need no racks. I can gather more honey in this style of box than in any other I have used, and have it in good shape. The Prize box is good, and I do not see why, if put up in racks *without separators*, and prepared the same as Harbison's section box, they would not be filled as soon as the H. box. The two past seasons have been so poor for honey, I have not been able to satisfy myself in this regard. When honey comes in slowly, and little at a time, as in the two past seasons, there will be a great many imperfectly filled sections, let them be prepared in any way or manner. The sticking of little bits of comb to separators comes from the same cause; viz., a small and irregular flow of honey. There is no great question in my mind but that bees will store more honey in sections without separators, and I mean to test the matter the coming season more fully. I am afraid we can not get along without separators in our Prize boxes, but I'll venture one prophecy: The future separator is not invented yet. One item more in regard to the Prize boxes: I am much inclined to think that the entrance to the Prize box should be more than ¼ inch, and especially so if I were going to use them without separators."

Here our talk on boxes and separators took a sudden turn, for in our conversation we had wandered into his bee-yard, and as we came up to a certain hive, Mr. Duster stopped, and, pointing at it, said:

"I can never pass that hive without thinking what a *hot* set of hybrids I had in it last year." Looking at me inquiringly he asked, "Did my wife ever tell you about it?"

"No, Mr. Duster; why?"

"Well," said Duster, "if she never told you, I reckon I can keep it."

"But I'll ask her now," said I.

"Yes, yes," he drawled out; "I see, I see. Perhaps I'd better tell it myself, as women are so given to embellishing things, and this scrimmage I had with these hybrids needs nothing of the sort; so, here goes.

"It was a hot day in August, about this time in the afternoon, and I had come from my business very warm. I stripped off all my woolens, so that when I stepped out among my bees I had on only my shirt and an old thin pair of overalls, scudding under bare poles, nearly, you see—close reefed, anyhow. Well, I was just passing that hive, and happened to think that the boxes were about ready to come off, but forgot what manner of bees these were of. I removed the cap, and commenced to lift the boxes; they did not stop like the Italians, and fill the space between the frames, holding on to the top-bar, and looking at you as much as to ask, 'What's the rumpus?' No, I guess not! They just streamed out and up both my hands and seized 'each particular hair' as fast as they came to them, humped their backs, and I felt something! Yes, I could stand that; but they knew a trick worth two of that. They went to work to try the texture of my overalls, and just here was an excellent opening for business, and I assure you they improved it. Did you ever have bees sting you when they could just reach through the cloth to your hide? Yes, I guess you remember it—just like red-hot needles—that's it. You ask why I did not at once put down the boxes and run? That's about what they asked the Irishman who had mounted a wild colt that ran with him under the apple-tree limbs until he had lost almost all of his clothes. '"Why didn't you get off?" Get off, en' by gorry, is it? Faith, en', en' how could I get off whin I had a tough match to stick on?—d'ye mind?' That was about my fix.

"'Mr. Duster! why don't you dust? run, or the bees will certainly sting you!'

"I stopped just long enough to see my wife standing on the back piazza of the house, trying to cover a smile with one hand when it was too big to be covered by both. Run! a man never had more inducements—so pressing, so warm. Run! well, didn't I run? I dropped my boxes somewhere, and I confess I ran — I, Mr. Duster, the bee-man. A small out-house close by (not built for any such purpose, though) gave me shelter. 'Any port in a storm,' thought I. 'Hold the fort,' came from that back piazza. You see, I had an audience too big by one. What I *said* or what I *thought*, while I fought the bees in there, is no one's business, I reckon," said Mr. Duster, sententiously.

"I've read somewhere," said Mr. Duster, "about the devils among the swine, and how they ran, and so on. Now, some of these scientific fellows don't believe it. If they had been where *I* was, they'd believed that Satan was in the bees, and I think too they certainly would have run as bad as the hogs and I did."

At the close of this philosophical conclusion, I bade Mr. Duster good-day. R. H. MELLEN.

Amboy-on-Inlet, Ill., Jan. 12, 1881.

FRIEND ROOP'S IDEAS ON WINTERING BEES.

ALSO SOMETHING ABOUT THE HIVE HE USES.

OUR excuse for writing this article is, we want to help our fellow-beings to save their bees. We have now had eight years, in which half of all the bees have been lost each winter north of the Mason and Dixon line. For fear some of our brethren will consider us wild in our estimate, we hand in the following, clipped from the Wauseon *Herald*, a county paper of Fulton Co., Ohio:—

EFFECTS OF THE LATE COLD WINTER ON THE BUSY BEES.

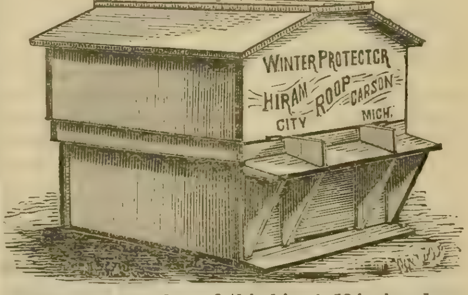
Strange as it may seem, that, with all the care and the benefits of experience, investigation, and improvements in the methods of bee-keeping, yet the mortality has never been so great among the honey gatherers as last winter. We have made some inquiry on the matter as to the extent of the losses in this vicinity and find that—

M. S. Pray	had	32	Lost	14
Wm. Lewis	"	53	"	46
Wm. Wilford	"	40	"	35
G. W. Platt	"	25	"	23
Dr. Ramsey	"	10	"	10
Judge Cately	"	1	"	0
Judson Smith	"	6	"	6
R. E. Terwiliger	"	11	"	11
Robert Bartly	"	6	"	6
John Watkins	"	8	"	7
J. D. Gay	"	14	"	11
J. W. Curry	"	5	"	5
Jacob Huth	"	7	"	7
Jacob Luke	"	16	"	12

Wm. Dowel, of Ai, kept 35 swarms of bees buried in a cave; are all living, while out of 23 that were left out, only 11 are now alive.

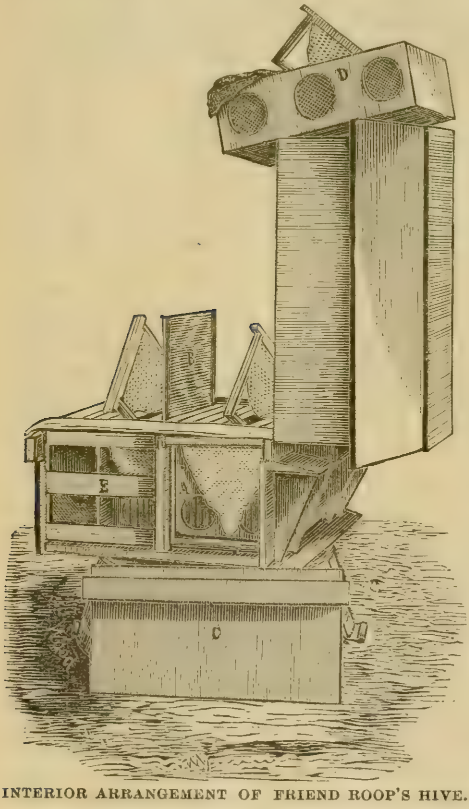
We also learn that Daniel Kepler, Secretary of the Northwestern Ohio Bee-Keepers' Association, at Napoleon, out of 55 lost 45; while W. F. Williams, of Napoleon, out of 150 lost 75; and Mr. Rakestraw, of the same place, out of 80 lost 76.

The above shows how well a few apiarists succeeded with modern appliances two years ago. We have spent much time during the past several years to find out the condition of bees each spring in all the Northern States—how wintered, etc. The first year or two of mortality set the bee world wild with excitement, and many new methods for safe wintering were heralded abroad, to the great detriment of young apiarists,—the advocates of these different methods not knowing themselves whether they would prove a "bonanza" or a "Peter out." Shall we then fold our hands and sit down contented with chaff packing and standard hives? We have nothing to offer as an excuse for showing our hive, for the reason that we have tried it the past seven years, and if "ye editor" will, we will tell you how it works for us.


WINTER PROTECTOR
HIRAM ROOP CARSON CITY MICH.

The brood chamber of this hive is 12 inches deep, 11 wide, and 18 long. It takes 12 frames 10x10 inches inside measure, or 1200 cubic inches of comb space, and 5 compartments around the brood-nest, holding 3 frames each. It will be seen that we have 27 frames all alike in the body of hive, or cases may be used as shown in cut. When the 5 side compartments have the cases in and the crate is on top the brood-frame, the colony has room to store just 100 lbs. of comb honey. When we work colonies for comb honey on top the brood-frames, and extract from those side chambers, we get an immense yield of each; for by that method our colonies never swarm.

When we prepare colonies for winter, as soon as they are done gathering honey in the fall, or a little before, we place the division board in the back groove, see cut.



INTERIOR ARRANGEMENT OF FRIEND ROOP'S HIVE.

By the way, the side-boards to the brood-nest have ⅜-inch grooves cut the same depth that the side-boards are rabbited, to receive the brood-frames—thus not only contracting the space bee-tight but air-tight, by the use of the division board. Remove all surplus frames and boxes from the side and rear compartments; shake the bees in front, and they will crowd themselves on to the 8 frames left, which should contain at least 25 lbs. of good sealed stores. Place the chaff cushion on top the frames, and fill all outer compartments with dry sawdust packed tight; leave them on the summer stand. If you find any weak in the spring, which is seldom the case, crowd them on to two combs with the division board, and see if they do not outstrip three times their number on two standard L. frames. Two combs of brood and bees may be taken from this hive every 10 days throughout the entire honey season, without perceptibly affecting the working force of the hive. A two-frame nuclei on two of these frames is in better shape to defend themselves than on two L. frames, and will do us a better job of queen-rearing than twice their number could do on two standard L. frames. To increase bees with this hive, close all the entrances to the side compartments by means of tin or wooden slips; drop the division board in the forward groove, and set up one strong two-comb nuclei in each of the 6 compartments. After each of the queens have been laying about one week, sell 5 of them, always reserving the one in the main brood-nest forward of the division board. Open all passages and allow the bees to communicate with each other over night; then place all together in the main brood department, and you have a strong colony ready for the sections. It will be seen, by opening 10 hives, that we can examine the condition of 60 nuclei, and a safer way of rearing queens and having them fertilized, we have been unable to find. The above is our system for successfully wintering bees, and will answer many questions. It is not patented, but cost us a great deal of hard study. **Hiram Roop.**

Carson City, Mich.

DOOLITTLE'S REVIEW AND COMMENTS ON THE A B C BOOK.

Continued from last month.

COMB HONEY.

MOTH WORMS IN COMB HONEY.

I think you miss it in not saying something just here in regard to moth-worms that always infest comb honey to a greater or less extent. If they don't bother your honey they do mine; and if a man down in Pennsylvania adopts this style of sending off his honey, and the worms injure it, he won't feel good, even after you tell him they don't bother yours.

TAKING SECTIONS OFF THE HIVES, BEFORE THE CELLS ARE ALL CAPPED.

Quinby said, and with much truth, too, that all boxes two-thirds full of white honey should be taken off before buckwheat honey was stored in them at the beginning of that yield, as partly filled boxes of white honey would bring more than when finished out with dark honey. If you will adopt the plan of storing it in a warm room for a month, all your advice will not be needed, as in that case unsealed honey will not heat or run in the least.

DANDELION.

This blossoms just with fruit with us, and so is of little account, except the little they get before and after, at beginning and ending.

Dandelion honey, after it is a year or two old, is just splendid.

DISEASES OF BEES.

Can't you manage to tell us why bees did not spring-dwindle prior to 1870? When I first commenced to keep bees, there were 100 swarms around me, kept by four or five parties that had kept bees for 30 and 40 years; and, although they kept on using box hives, still not one of them has a bee to-day. Tell us what did it. I confess I can't see through it at all.

To come right down to the point, I can't either, friend D., even after all the learned and exhaustive articles we have had on the subject. Once they lived almost without care, and now they don't.

DRONES.

AGE OF DRONES.

Fultz, of Muscatine, Iowa, says, in *A. B. J.* for January, 1880, that drones live only 24 days, while I claim they live to about the same age as a worker, if the bees allow them to live that long.

FEEDING AND FEEDERS.

FEEDING BACK.

Haven't you changed your mind on this feeding back? I have again tried it this season, only at a loss, as I have to feed 2 lbs. to get one in the boxes. Betsinger and my neighbors succeeded no better.

I agree with you that such is the case exactly until the brood apartment is crammed; but after that, there are not more losses than I have mentioned.

THICKENING WATERY HONEY.

If this is so, how came your thin honey from basswood you told us about a little while before on these pages? Why did they not thicken this in the same way? I still believe all evaporating of nectar is done in the hive, as I once wrote.

I should explain it thus: The basswood yielded in such quantities that they carried it right to the hives. The Simpson plant furnished only a limited amount comparatively.

FOUL BROOD.

If you don't give them any comb, they don't want any confining, as I repeatedly found in 1871, '2, and '3. A new swarm from a diseased hive, hived in an empty hive, will never have the disease, unless they get honey after the larvæ has hatched from a hive that has the foul brood; so your "starving part" should be left out. I ought to know, as I renovated my whole apiary in 1873.

FRUIT-BLOSSOMS.

Betsinger says, and I agree, that if we had the same number of bees in a hive in apple-bloom that we do in basswood, the yield would be as great. I once had 8 lbs. stored in one day, with not over one-third the bees I have in basswood. Apple is a great yielder of honey, sure.

Then we have a most excellent reason for having *powerful* colonies to commence the season with.

HIVE-MAKING.

A good colony of bees will store almost as much honey in a half-barrel or nail-keg, as in the most elaborate and expensive hive made, other things being equal.

If I am correct, it was E. Gallup who said this; E. Gallup certainly said it, and Quinby may have done so; but I do not remember that he did.

How is it, friend Root, that when you write a book you give only a description of *your* hive? When L. C. Root writes a book he gives a description of the Quinby hive only. Has not Prof. Cook set you both a good example by giving several, and then giving his reasons for adopting the one he uses? As you know, I do not agree with you on hives, and think you are prejudiced on many points; but I have gone over the ground so much in the bee journals, that I will not say more here, except to say that, if I used the L. frame, I certainly should use side boxes as well as top; and as I took out the full ones on top, raise the partly filled ones from the sides to the top, placing the empty boxes at the side each time. This is *the* principle to secure a large yield of box honey, and we think we have proven it to you by our reports the past eight years. Still, you do not even mention the matter, but drive ahead as if yours was the only way. Please excuse, but so it seems to me. I know you consider the interchangeable side and top boxes complicated; but can't we well afford it, if from 5 to 10 lbs. extra can be secured from each stock each year thereby?

I know, friend D., that this matter of hives is a very important one, but if Quinby and Gallup were right, as in a few sentences back, does it really matter so very much? I have described minutely how to make both summer and winter hives for the L. frame; but if anybody prefers any other sized frame, they can vary the directions to suit, without any great difficulty. I have not described the hive preferred by yourself, Prof. Cook, L. C. Root, Dadant, Harbison, and many others, because it would make the book too voluminous for one thing, and because I could not give directions for each operation all the way through, without modifying all the time, to suit the different hives. Besides, I should perplex and confuse the beginner beyond measure if I tried to do so. Even though Prof. Cook uses your sized frame, he uses a differently made hive; and, if I am correct, you would hardly agree with his directions any more than you do mine. Friend Cook gives a general idea of the whole subject, without going into minute details as I have, and his book in this respect fills a need that many of the others do not. In deciding to have my whole book written principally for the L. frame, I did it with the belief that you would do nearly if not quite as well with that frame as with your own, and also that by far the greater part of our bee folks had that frame already in use. To advise everybody to throw away the hives they have, and adopt another, would be a most serious matter, and I have not intended so to do in any thing I have written; but I would advise all new beginners to fall into the great beaten path as far as may be, in deciding upon implements to be used. I feel now as I did at first, that it is best not to confuse beginners by attempting to describe more than one frame, and the summer and winter hives for holding this one frame. I indorse your idea in regard to raising up the side boxes.

[*To be Continued.*]

DOOLITTLE ANSWERS QUESTIONS.

QUEENS REARED AT DIFFERENT SEASONS.

UPON recovering from a long and severe illness, I find Doolittle has many questions to answer; and, to answer all within a given limit, we will try to be as brief as possible. First comes W. Z. Hutchinson's questions on late queen-rearing in Dec. No. After reading his report in Jan. No., we were almost inclined to laugh at Doolittle's admitting, that "we queen-breeders have greater facilities for learning facts in regard to any specialty, etc.," when facts would show that Doolittle raised four times more queens before Hutchinson ever went into the business than friend H. has in all his life. Years ago we rode the hobby of queen-rearing, and raised queens by the hundred, both in season and out of season, till we supposed we knew something of queen-rearing. It was through these experiments that we arrived at the conclusions given in Oct. No. of *A. B. J.*, and it was only when we came to the conclusion to rear all our queens, as far as possible, from natural cells, and during the honey season, that we were enabled to produce the results in honey, given for the past eight years. Now, just a few words in regard to following nature: Friend H. tells us about farmers controlling the stock, fruit-growers pruning their vines, poultrymen stimulating their hens to "shell out" the eggs in mid-winter, etc., but none of these things touch the point. Now we ask, Does a poultry-breeder try to or succeed in raising fine breeding stock from chicks hatched in November or December? or does the shepherd raise his choice stock from lambs dropped at that season of the year? or the horseman his pet horses, selling for perhaps $1000 and upward, from colts foaled in October or November? Nay. If he wishes stock looking toward perfection, he rears them at the time nature intended to have them reared. In fact, it would be hard to so pervert dame Nature as to have animals come into existence at the season of the year above mentioned. But with the bees we can compel them to rear queens, even in mid-winter, if they have brood. And now, friend H., I propose that you try rearing some of those fine queens in January and February, as brood can almost always be found at this season of the year in strong swarms; and as friend H. uses none but strong swarms for queen-rearing, it will do no harm to feed them and rear us some just as good queens as would be hatched out the last of June from natural cells. We think that, by this time, friend H. has come to the conclusion that if he had his choice he would prefer, *for his own use*, queens reared in June and July, as the Creator of all things designed they should be, and so we will drop the matter.

DOOLITTLE'S AVERAGE PROFIT ON BEES.

Next we are asked by friend H., in Jan. No., what has been our average profit per colony since we first engaged in bee culture. Our experience with bees covers a period of 12 years, beginning with 1869, which was the poorest season ever known in New York. Our average profit in '69, per colony, was $3.03, and $35.40 in 1877, which was our best season. Our average number of stocks during the 12 years has been about 48, and the average cash profit from them during said 12 years has been $19.36, or an average of $932.28 for each year. We have hired perhaps 40 days labor during the period of 12 years, my wife and I doing nearly all the work.

DOOLITTLE ON THE BEE-POISONING MATTER.

Next I am called upon by Geo. Rosekelly to give my views on the Klasen *vs.* Krock case. We wish to say, that the trouble all came by those few harsh words at the outset. When will men learn to carry the impress into practical, every-day life, of the words, "A soft answer turneth away wrath"? etc. When Mr. Krock told Mr. Klasen that his bees were damaging him, the proper thing for Mr. Klasen to do was to have told Mr. Krock that he was sorry; but, as he could not control his bees, he (Krock) should be as patient as possible, and at the end of grape harvest he would pay him for all damages. Again, a few pounds of honey given now and then by Mr. Klasen to Mr. Krock, and a plate of grapes occasionally given to Mr. Klasen all along through life would have so smoothed the way that Mr. Krock would have borne much before he would have called for any damage. Is not this far preferable to contention and strife, and of less cost in the end? As the matter now stands, I think the course advised by our friend A. I. Root the better one to pursue.

PERFORATING, AND SLOTTING SEPARATORS.

Next we are asked in regard to perforating separators, when used for box honey. We first used separators in 1872, and the thought at once presented itself, that the more openings there were between the boxes, and also between the surplus arrangement and brood-nest, the more honey could be obtained. Our first experiment was to have the tin cut so as to leave ½ inch space at both top and bottom of the boxes or sections for the bees to pass through; but at the end of the first season's trial we were convinced that we had much too large space, as many of the combs jutted out beyond the sections, both at top and bottom, so we could not crate it, to say nothing of glassing it. Our next move was to leave ⅜ at the top and bottom, and also to construct a few so as to leave ⅜ slots through the separator so the bees would be divided up as little as possible. A second failure was the result, for our combs were nearly as bad at top and bottom as the previous year, while the sides of the combs much resembled a washboard, especially those built when honey was coming in rapidly. The next season we left only ¼ inch above and below the separator, and made a few with quarter-inch slots in separators. We also made our side-box hives with the division-boards between side-boxes and brood-combs slotted plentifully with quarter-inch slots. Now, while the ¼ inch proved to be the right width to prevent the bulging of the combs, yet when the season was over we could see no difference in favor of the perforated separators. Since that time our hives have been made without the perforations. After six years of practical work in the apiary, with those hives still in the yard, we have not seen difference enough in favor of those perforated to warrant making more like them. Having the sections near the brood, with enough space at top and bottom of the separators to admit of the warm air generated by the bees passing freely into all the sections, as well as to convey to the bees the idea that they are not excluded from the warm cluster or brood-nest, is all that seems to be required. G. M. DOOLITTLE.

Borodino, N. Y., Jan., 1881.

If I mistake not, friend D., very *fine-looking* queens have been raised in the winter, but I do not know how we are to tell how good they were, because it was impossible to have them fertilized.—Many thanks for the valuable facts given us in regard to separators. We have a machine now in our tin-room that will perforate four sheets of tin at a time; but the expense of it is $20.00 instead of five, as we hoped it might be last month. We can now furnish perforated separators to any who may choose to try them, at just double the usual prices. From experiments I have made, with and without separators, I am strongly inclined to the opinion, that the perforations will be an advantage when a great crop of honey comes, with cool nights. It will likely be tested pretty thoroughly the coming season. Our machine at present is fitted with punches to cut ⅜ holes

CYPRIAN BEES IN THEIR NATIVE LAND.

BY OUR OLD FRIEND FRANK BENTON.

GLEANINGS has been a very welcome visitor in my island home each month during the past trying season; for, though my health, my eyes, and the work in the apiary would not permit me to read any of the journals thoroughly, I could still look them over and read some. Had it been possible, I would certainly have added my testimony in regard to many points which have been discussed during the preceding months, especially the references made to the new races of bees lately introduced into America. My work with these bees has led me to several conclusions which I believe, if stated, may aid not a little those whose experience with them has been more limited. I will tell you first a little about the season here, that you may see that I have had a chance to handle the bees under various circumstances—oftentimes very unfavorable conditions.

THE SEASON.

My first work with Cyprian bees in Cyprus was done in the month of March, at Kythrea, among the mountains of the north coast. The winter had been one of unusual severity, and had continued long, while cold rains had prevented the bees from flying much during the weeks just preceding the time of my work. Of course, as the natives cut all the honey-combs from the rear portion of their hives—clay cylinders—just at the close of each honey season, those colonies that had managed to survive the winter and early spring were scantily provisioned, and cross enough when touched during the chilly, rainy weather. I had no smoker with me, but with the greatest smudge I could raise I could not escape multitudes of stings. After two mule runaways, in one of which I was literally covered with bee-stings while saving some seven or eight mules from death by stinging, and several sleepless night-journeys over mountains where the only passage is a break-neck mule-path, "the Cyprus Apiary" was found to number something over one hundred colonies. During the following weeks, the supply of honey brought in by the bees was scarcely enough to favor queen-rearing, and nuclei had to be fed sugar syrup. After about the middle of May, very little was gathered; and during the later months, since July, nothing; for no rain fell here between May 10th and Sept. 15th, and with no source of irrigation, the fields became perfectly barren under the fierce tropical sun of the long summer days. The mercury rose to 114° F., and sometimes a hot wind—the *sirocco* of the African desert—blew from the south. Cool nights began about the middle of last month, though the days continued warm—even hot at mid-day—until the second week of December. Cold rains and wind followed, until to-day it is sunshiny, and the bees are again bringing in pollen.

HANDLING THE CYPRIANS.

After transferring a large number of colonies, and spending some hours getting the frames nailed down ready for their journey over the mountains, I thought Cyprians would defend their hives against two-legged intruders quite as well as any bees I had ever seen. I knew, however, that it would be hardly fair to denominate them cross, simply because they resented handling during cold spring weather when provisions were very limited. With a smoker and more moderate weather, especially if I had baited them a little with sugar syrup, I found I got along very well in the main, but every now and then some hive would refuse to be quieted by smoke. Many of these instances I could not account for, because I was sure I had handled the combs carefully, and observed all the little points necessary to successful manipulation—at least, all I would have observed with Italian or black bees. But now I understand the matter better, and find that Cyprians are less inclined to sting than Italians, provided they are handled with as much reference to their peculiarities as is necessary with Italians. Under all conditions and at all times of the day, even from daylight until nine o'clock at night, I have handled Cyprian bees, without smoke, and with no bee-veil nor even a hat on my head. Bare-headed, bare-handed, with low slippers on my feet, no coat nor vest on, my shirt cut low in the neck, and all my garments thin, I have worked hour after hour among the Cyprians just as fast as I could make my limbs and body move, transferring colonies, dividing swarms into nuclei, and putting up queens for shipment, all the while shaking and brushing the bees about just as though they were so many Italians, and a big basswood harvest was on hand. I say *shaking* them, for they can be shaken from the combs quite as easily as can black bees, and *brushing* them is a dangerous experiment unless they are well filled with honey. Now, it must be remembered that all this was done at a time when no honey was coming in, and when feeding had not been kept up regularly, the colonies that had not been fed and those that had having been opened indiscriminately; the handling was often at the most unseasonable hours of the day; and, lastly, there were often many visitors present; yet I was rarely stung, and I recollect but one instance in which a visitor was stung.

The only points I observed carefully were the following:—*I opened the hives with extreme caution; the quilt was removed slowly, and the bees left to themselves for a moment before I touched the frames; then the first frame was very carefully removed*, after which no further *especial* caution was needed, except that *there must be no jarring of frames*, either in removing them, in handling, or in replacing them. Any one would be likely to say, "These things are all very good to observe with any race of bees; but will they prevent Cyprians from stinging, when their observance in handling blacks and Italians, under the conditions you mention, would avail little as far as keeping these races under subjection is concerned?" It seemed to answer with me, and I discovered that the Cyprians were very susceptible regarding the sudden admission of light into the brood apartment, and they resent in the strongest manner any jarring of the hive or combs. I think they are far more likely to be aroused by either of these things than are the Italians or blacks, and are not as easily subdued with smoke, or, in fact, at all. They will follow the bee-keeper with great pertinacity as he leaves the hive, going a long distance, and even through several doors, for a chance to sting. When a hive is once thoroughly aroused, the better plan seems to be to close it and leave it for an hour or more. They meddle with passers-by who do not touch them, less, even, than the Italians. The above would likely lead to incorrect inferences should I close this subject without stating the conclusion which the season's work among the bees of Cyprus has caused me to form regarding the relative rapidity with which Cyprian and Italian bees can be handled; hence I state here that I fully believe I can handle the Cyprians with one-half greater rapidity than I can the Italians; that is, with proper management, a given operation in manipulating bees can be performed with *three* Cyprian colonies while the same operation is being done with *two* Italians.

THE MARKINGS OF CYPRIANS.

Time will not permit my treating this topic as I would like, yet I can not forbear a word or two, since it has so often been brought up in GLEANINGS this summer. The bees of Cyprus are *very uniform* —surprisingly so, I think. We obtained colonies at many points distant from each other, and saw bees in many places where no purchases could be made, but *all* presented the same appearance, taking into account, of course, the age of the bees and the amount of food they were likely to have in their bodies. The true Cyprian is a yellower bee than the Italian; indeed, I think the average Cyprian is yellower than the brightest Italian. I refer to the worker bees alone. Its body is more hairy, and the abdomen more slender than will be found among Italians. When filled with honey, the worker shows three yellow bands, as does the Italian. Mr. Cori, of Bohemia, who first described these bees, and procured the first colony from Cyprus, stated the worker bee has only *two* yellow segments, but he surely failed to count the end segment, next to the thorax, without which the Italians would have but two yellow bands. The fourth yellow band, as with the Italians, is sometimes seen, but a more distinctive mark is that the segments back of the yellow bands are so tipped with whitish hairs as to give the abdomen of the Cyprian a very ringed appearance. The two most distinguishing marks are, however, the following: The pure Cyprian is yellow on the under side of the abdomen, from the tip nearly forward to the thorax; and, second, the shield on the back of the thorax between the wings is very prominent and plainly yellow. On account of its shape, I call this the *crescent*, and it shows that its bearers are from the Turkish empire, or descended from those who did come from this far eastern land. The Cyprian drones are in general much more mottled with yellow than the Italians; and, though they are not uniform, many are of a very brilliant golden hue. But I claim that the true Cyprian will make itself known quite as much by its

QUALITIES, AND NOT MARKINGS.

I find the Cyprians active, strong-winged, sturdy defenders of their hives, fighting against fearful odds to preserve an existence, *exceedingly keen-scented*, so that no drop of sweet escapes their notice under conditions which would conceal it from other races of bees. They are very prolific, and rear brood late in the season. We have had frost here, yet to-day I find brood in all stages in hives of Cyprians. One other quality of great importance is noticeable: A strong wind is heeded by the Cyprians, and, upon its approach, they gather in their hives to avoid it; or, if the day open windy, they do not venture forth. Those who have them in America will note this, and that they will not dwindle as Italians do during the coming spring. Still another point in their favor is, that they can be shaken from the combs very much as though they were blacks; but if left to themselves do not run off, having in this particular the same disposition as the Italians; namely, they spread evenly over the combs and remain quiet when the latter are handled.

FRANK BENTON.

Larnaca, Island of Cyprus, Dec. 14, 1880.

My experience with the Holy-Land bees very nearly agrees with the above; for when I once get them thoroughly aroused and up to the "fighting pitch," I have never succeeded in quieting them with smoke, nor any other means, except to close the hive and let them get quiet themselves. I presume most of you have seen hybrids that manifested much of the same spirit. If the colony is weak, there is not so much danger of their getting thus roused up; but when the hive gets boiling over full, just look out how you set a frame down where it will slip and jar, or pinch a few of the bees. Use them well and they will use you well; but woe betide the man who is awkward or indifferent. Such people would better get some very yellow Italians, that have been bred several years for their gentleness and yellowness, letting alone other qualities.

Knowing how anxious our readers all are to hear every word from friend Benton, I have taken the liberty of giving, also, the letter below, although it was evidently not intended for publication. Friend B. will excuse the liberty, will he not? By all means, let us hear of your travels in pursuit of these new bees.

With the aid of the good wife, who has done much writing and copying for me lately, I have gotten off a letter for GLEANINGS to-day. I hope after this to give you something oftener. You know, of course, that my long silence was an unwilling one.

A few words as to what I have before me for the winter will no doubt interest you.

I leave here in a few days for India and the East Indian Islands, whither I hope to find some valuable bees, which will, in that case, go direct to Mr. Jones, in Beeton, Canada. The two races to be looked up especially are *Apis dorsata* and *Apis zonata*, but I trust others may also be found. The route will be as follows: Beyrout, Jaffa, Port Said, Suez, Aden (Lower Arabia), Bombay (Hindoostan), Colombo (Island of Ceylon), Singapore (Farther India), to Batavia (Island of Java), and perhaps I will visit Timor, Celebes, and the Philippine Islands.

Besides the bees, I shall try to obtain seeds of honey-producing plants, and shall not forget valuable grains.

I take with me 25 Cyprian and several Syrian colonies, and shall employ various styles of boxes and manners of giving food.

I expect to return here early in the spring, to rear Cyprians next year. Will write you from various points of my journey. FRANK BENTON.

Larnaca, Dec. 14, 1880.

SUCCESSFUL BEE CULTURE.

THE NEED OF TACT IN BEE CULTURE.

MR. EDITOR:—The above caption covers so much ground, that I propose only to touch upon one or two branches of the subject, and I don't propose to say a word about queens, comb foundation, bee feeders, hives, or any of this class of useful implements, for all about them has been told, and well told, very many times, by able and experienced bee-keepers. Has it not occurred to you that men who were first-class mechanics were rather more apt to fail, when trying to carry on business "on their own hook," than the class called "botches," or even those who knew nothing of the trade? My observation teaches me that such is the fact. I know it is often true, that men who possess great ability as manufacturers (in the broad sense of the term), or capitalists, are forced at first to begin as journeymen mechanics, in order to get their first little "start;" but I always notice that these men of sound financial ideas are usually poor mechanics. The ability to earn a dollar, and that of making it earn another, are quite different powers. Nearly all our successful men have repeated the same adage, "It was harder to get my first thousand dollars than the next *twenty* thousand." No one supposes that a company start a glucose-factory because they or one of their number knows the proportion of the different chemicals used, or even their names; no, they *hire* a man who knows *that* part to perfection, and this fellow "lives from hand to mouth" all his life, while the profits of his skill go to the men who saw the commercial need; who knew enough to keep their property running night and day through the busy part of the year; knew enough to tell an honest man by looking at him; knew enough to keep their property insured against fire; knew enough to keep perfect system and order throughout the factory; knew how and when to sell for the highest price. I fancy that a man of this kind, though ever so unscientific, "*will not down.*" He will catch a swarm on a bush, and then—look out.

As there is hardly a calling known to man, in which the operatives are so universally the capitalists as in this pursuit of ours, I deemed that a few thoughts upon this important side of the business will not bore your readers.

No one is willing to pay a higher tribute to talent than I am; but I believe that it requires *tact* to make talent pay a dividend. Now, in our business I call the man who knows all about the physiology or hypothenogenesis of the bee, the chemical elements of beeswax, honey, etc., a man of talent; but the question is, Has this genius got the tact to make this knowledge applicable to the business he is pursuing? It has been said that "talent knows *what* to do, tact knows *how* to do it; talent speaks learnedly; tact, triumphantly. Talent makes the world wonder that it gets on no faster; tact excites astonishment that it gets on so fast."

"Tact clinches the bargain,
Sails out of the bay,
Gets the vote of the Senate,
Spite Webster or Clay."

Ready tact will often prevent a disaster that slower talent finds, later, that it can not cope with. Tact being a great aggregation of little thoughts and actions, is almost indescribable. It can by no means be written on paper, as can talent.

The successes of tact and failures of talent are, by the failing class, universally credited to "luck." Poor luck! who ever heard of his getting any credit for a success by the one who knew the most about it?

I once heard a smart practical and successful honey producer say of one of our leading and brightest men of talent, "Give him my three apiaries, and the best locality in Michigan, and he could not support his family. I know him; his bee-keeping is all on paper."

If I started out with any intent to try to tell of what this tact consists, I fear I shall have to give it up. I am sure that it is the open sesame to success, however, and all who need to make bee-keeping support, or help to support themselves and families, should try to cultivate to the fullest extent this art of handiness, quick perception, and practical way of doing things, called tact. Honesty, caution, energy, and a will, are all important requisites to success. It is fatal, to suppose that mankind are all as honest as you are, or all as dishonest as you may be. We need not be weak because we are honest. A "happy man" between the radical and conservative, is also a key to success. JAMES HEDDON.

Dowagiac, Mich., Jan. 4, 1881.

Very good, friend H.; but what shall we poor fellows do who are conscious that we have not tact? It seems to me the outlook would be a little sad, if we had no way pointed out to us whereby we might climb above these natural lacks and deficiencies. Let us as you say, cultivate to the fullest extent, this art of handiness, etc., and if you will excuse the liberty, I would like to suggest to the boys and girls who have begun to feel that they are not handy about things, and have not tact naturally, the little text,—

> If any of you lack wisdom, let him ask of God, that giveth to all men liberally, and upbraideth not; and it shall be given him.—JAMES 1:4.

FRIEND STANLEY'S STORY.

WHAT HE HAS DONE WITH BEES IN FOUR YEARS.

I AM, or have been, located on the prairie, with a narrow bottom of timber reaching halfway round me, the edge of which reaches within 1¼ miles. The other side is all prairie, or, rather, farms, now. There is some white clover, but very little; the land is run mostly to wheat, and corn, and red-top grass, which makes our hay. Four years ago there was a great deal of the land uncultivated, which produced an abundance of Spanish needles, which is our main honey-producing plant. Buckwheat and smartweed sometimes yield some honey, though I have never been able to see the bees get more than enough to raise brood on either. Two years ago there were 20 acres sowed the 1st of June for fertilizing, and I could get none, though I think it did my bees good by keeping up brood-rearing through July and August. I have had honey stored in June one year, and that was in 1877; and at that time I was not well satisfied what it was gathered from, but think from clover; but almost with certainty you can rely on having some honey the first or second week in September from Spanish needles. I have never known an entire failure of it, and the partial ones were caused by cold and wet weather, which is uncommon at that season. Bees have always been able to fill up on it. I have seen hives that did not have 2 lbs. of honey in the brood-chamber the 27th of August, storing honey in caps in 8 or 10 days, and it is very fine honey, though a little strong until it has age. It lasts ten days to two weeks, and then we are done unless we have buckwheat. There is some goldenrod and smartweed, but they do not yield much honey here, though the bees generally get a living until frost, which usually comes about the 10th of October. Getting our surplus so late, we need no feeding for winter. Almost any colony will have winter stores. Well, in 1876 I began making hives for myself, and they were liked so well I soon engaged about 40 hives, to be transferred on shares—a hive for a stand of bees in a box or log hive, which were then selling for $5.00 to $7.00. Well, I got worse and worse with the bee fever;

those 20 stands didn't give me more than 300 lbs. of honey, but I consoled myself with the tales of some other bee-men about what they had got, such as 800 lbs. from 15 hives, and another 8 gallons from one hive, and another "8 caps" thought about 100 lbs., etc. So, in the winter of 1876 and '77 I made some 200 hives; sold some, transferred some on shares, bought a stand of Italians from Dadant's warranted queen, $14.00. Some got as high as 90 lbs. of section-box honey from one stand; some not over 15 lbs. on an average. So, by October I numbered 80 stands, sold 20 for $125 00. I should have stated, that in the winter of 1876-'77 I got me a saw and sent for GLEANINGS, and made me a hive as described in circular. You were then blowing the hoop hive, which gave me the idea of a half-story, and raising it and putting an empty one under it, and I like it rather better than the full story. By using 2 caps or hoops, it just holds a brood frame, so it is truly an adjustable hive. Wonder if Mrs. Cotton knows it.

MITCHELL.

Well, right here I will tell what a Mitchell man wanted me to do. He had bought the right of Wayne and Edwards counties. He heard I was trespassing, and came over to have the matter fixed up. Yes, I told him I was using division-boards; could not dispense with them hardly at any price. Well, you ought to have seen him smile and try to tell how indispensable they are to successful bee-keeping, and how much better I could manage my bees in an L. hive, and proposed to sell me the right for the division-board and hive. I then asked him if he had really bought the right. He said he had, and *that* he would try to sustain if I would not pay for using the board. I stepped in and got a few numbers of GLEANINGS, and read from Humbugs and Swindles. I then told him he was the man that was humbugged, and that, instead of reading Mitchell's book, to send a dollar for GLEANINGS, then he would be swindled no more by patents. Well, he said he would write to Mitchell, and if he did not stop me he would not pay him any more on it. So we talked the matter over, and parted friendly. I was to use them until Mitchell "did some thing;" after that I sold his partner some hives, but have never heard of Mitchell "doing any thing" but duping ignorant farmers.

Well, of course the 90 lbs. were from an Italian that I raised early in the spring, and '77 was the best year we have had since I have been in the business, and now I thought that all I needed was enough bees like that to get rich, or, at least, to make it self-sustaining. So, in the fall I bought 3500 ft. of lumber; made 250 to 300 hives; sold some; transferred on shares, and by the 1st of August I had 140, half of which were scattered through the country, where they were transferred, and about that time I bought the fdn. machine. The season so far had been a bad one; only a little while the last of May and first of June bees had swarmed quite lively, and now many of the swarms were starving right in August; but I managed to save all that I had charge of.

MOVING BEES TO NEW LOCATIONS.

Some time in July another bee-man (Dalzell) came up to me and Sibley, who also was a bee-man, and in conversation said that his bees were storing honey. After talking awhile he left us, and as he went away Sibley remarked that Dalzell was "gassing," and that he would bet his bees were starving, for he saw him bring honey to town some time before that, that his bees ought to have had to live on. I remarked that he was near the bottoms, and perhaps Dalzell was correct, and I believed I would go down in the neighborhood and see if bees were doing any better. So, in a few days I went, found some bees in log and box hives, and they *were* carrying in honey. I then made arrangements with the man to move 8 stands of mine, to try the location. I took them down in a few days, and as soon as I opened them they seemed to scent the honey, and in 3 hours you could not have told they had been moved; they were rolling in honey and pollen at such a rate I did not go back for about 10 days, but they had done so well I went and got 8 more stands that I had out in the country that were on short rations, but I was too late with them. It was now about the first of August, and as blue as things looked, I went to work and made some fdn., for I knew they would need it the first of September. Well, there were plenty of my bees that hadn't 5 lbs. of honey in their hives on the 20th of August, and *that* was what I fed them; but relief did come the 27th of August, and in ten days they were in their boxes; but my 90 lb. hive made only 50 lbs. Well, down I went to the bottoms, about the 24th or 25th of September, and found things "lovely." The most of those at home were just nicely started in their boxes when the bloom failed, and so I was not long in making up my mind. I went to where I had more on shares; got a load, drove down, and the lady of the house plead to have me take the load somewhere else, for they "stung the children." She directed me to a man that would take them; it was in sight. Off I put, although it was then noon. I soon drove a trade for locating them, and all the rest; and so I worked, night and day, until I got all moved; but I got paid for all my work. Not as big wages as some get, but enough for me at that time. I got $250 to $300 worth of honey. They stored honey until hard frost. The first two frosts didn't seem to affect the bloom in the bottom, while every thing on the prairie was dry enough to burn. I will state, that the most of them I moved 10 miles; some 17 miles; now, it was in July of this same year, while things were so blue, that you sent me the first imported queen (that I wrote you an article on, and I have always thought you ought to have published it.)

HOW FRIEND S. INTRODUCES QUEENS.

Well, the second one I have never written you about. You sent her, I suppose, as she came to you, and left me to be the judge of what she was worth, and how was I to know how she would compare with the lot; whether she would look like a $4, $5, or $6 queen? But it was all the chance; then I introduced her all right, and I would not fear to try a $50.00 one if I had her, for I have never lost one yet that I took any kind of pains with, and I believe I never lost but one, and I have turned them loose at the entrance, and in at the top, and caged them. I just do according to the circumstances, but am always sure there is no other queen in there. Well, now, if you will send me another one as good as this one, you may set the price; and if nothing happens, I shall have some early queens to dispose of from her. I have between 175 and 180 that I raised from her last season. I now have 240 stands; have bought a piece of land, and intend this summer to improve it.

I have now got up to the fall of 1878, and have not told what I started to tell; but if you think it will do any good, you can put it in on one of those extra leaves you are going to give us, and then I will tell you about last year, and who should keep bees, and who should not, and where they may be kept, and where not; and I might tell you how they can be kept in this county. I have never lost a stand of bees by moth, blacks, nor Italians; and for three years have never lost one from any cause. I have lost queens in the winter, but I always save the bees, and set them to work. THOS. C. STANLEY.

Jeffersonville, Ill., Feb. 17, 1880.

The above very good letter is just about one year old, as you see, and it has been waiting all this time for a place, principally on account of its length. The one friend S. thinks ought to have been printed was, I fear, passed by on the same account. Now let me suggest a little. Had friend S. broken this letter up into several small ones, it might have all been given during the year, and the part of it referring to moving bees to new pasturage would have made an excellent article of itself, and might have done a great deal of good during the past poor season. It is my impression, that every apiarist of 50 or more colonies would, in many localities, find it profitable to either scatter a few colonies at different points, or to visit hives belonging to others, until the most favored points were hunted up; then move a part of his bees, where they seem to be doing best. A success, instead of a failure, might often be secured with comparatively little labor. Who will give us some more facts in this especial matter?

RAMBLE NO. 2.

WINTERING BEES IN A CISTERN.

OUR ramble this time leads us to the residence of our esteemed friend Mr. B., who has over 100 swarms of bees in the old Clark patent box hives. Mr. B. and brother run a large farm, and the bees do not receive the attention they should, to achieve the best results from them. Mr. B. is a breeder of fine horses, and if you would converse with him ten minutes, some way the bees would be forgotten, and you would find yourself in the stable discussing the fine points of that jet-black stallion "Honest Dan," or the record of "War Eagle," who stands in another stall. This stallion has come out ahead in several races, and the owner is proud of his record.

But I soon tire of horse talk, and suggest we return to the bee-yard. We start with that point in view, but the first I know we are in another stable, and B. is expatiating upon the style and action of that fine black team. The pedigree is pure Rysdic Hambletonian. When I can get a word in edgewise I tell him my best queen "Fancy Bell" is daughter of "Cleopatra;" she of "Gazelle," she of "Alley," and Alley of "Bianconcini," of Italy.

I found, upon reaching the bee-yard, that to keep his mind on the bees I must mix in a little horse talk. Said I, "Mr. B., Rysdic Hambletonian, did this swarm take the pole?"

"Oh, yes!" said he; "I got them on the mulleins the first heat."

"Well, how about this swarm that lays out so all over the hive?"

"Oh! that got the inside track, and took the home stretch."

"Have you got much bottom this year, Mr. B.?"

"Not much; I wintered them in a cistern, and it took the wind out of them, and they didn't make the first quarter; i. e., quarter crop of honey."

In answer to my incredulous remarks in relation to wintering his bees in a cistern, he explained that Mr. H., a near neighbor, had a dry cellar under his barn, and he obtained permission to use it. The water had troubled them somewhat the year before, and the cellar had been thoroughly cemented, bottom and sides. It was very dry, and wintered finely until the January thaw. The proprietor had made no provision in relation to surface water, and it ran into the cellar, and, being cemented, it held water like a cistern; in fact, for the time being it was a cistern, and began to fill up rapidly.

"Why," said I, "for the land's sake! what did you do?"

"Oh! I put in a pump, and pumped it out, of course."

He remarked that his bees came out considerably demoralized. There were but few dead swarms, but the rest were all weak, and the swarming fever didn't possess them to a great degree.

I think the foregoing shows why everybody should *not* keep bees. If his bees had come out strong, he would, with proper management, have secured a profitable crop of honey. Since keeping bees as a business, we have never had a season that failed to give a profitable return if our bees were in good condition in the spring. There is a time during every season, perhaps for a few days only, that honey is secreted by some flowers; and if our bees are ready for the yield with extra stories of empty comb, you will find them full quite suddenly. During the past season, about the only honey we obtained was from basswood; the yield was short, and if we had depended upon comb honey we would have recorded almost a total failure; but by extracting we obtained almost 40 lbs. to the hive, while our best gave us 107. This swarm of hybrids, No. 67, has been ahead for three years. I thought so much of this queen I thought I would use her as I would an old horse—keep her as long as she would live, for the sake of the good she had done. In examining the hive in September, I was surprised to find a young queen doing duty. I was about to drop a tear in memory of the old one, when, upon lifting out another frame, I was rejoiced to see the familiar face of my dear old queen. I carefully replaced the frame and closed the hive, and, upon a subsequent examination in October, she was still there, but very decrepit. It seemed as though she ought to have a cane and a pair of spectacles. We hope much from the young queen, that she will perpetuate the qualities of her mother. JOHN H. MARTIN.

Hartford, Washington Co., N. Y., Jan., 1881.

BEE-KEEPING FOR PROFIT; BY MRS. LIZZIE E. COTTON.

THE book is neatly printed, well gotten up, and would be well worth a dollar, if the same information could not be otherwise obtained for less money, or, perhaps I should say, with a great deal more information for the same money. In fact, the principal fault I should find with the book is its small size for a dollar; viz., 128 small pages, in light paper covers. I know that everybody does not agree with me in pricing books according to size; but for Mrs. Cotton's own good, and that sales of the book may be increased, I would suggest that it be sold cheaper, or more matter added to it. People are in the habit of getting a pretty good-sized book on bees for a dollar, and I fear they will be disappointed. I believe Mrs. Cotton to be an earnest, hard-working woman, and I wish to see her succeed. In fact, I shall be glad to sell her book, if she will permit me so to do. I am satisfied she sees the mistakes she has made, and is willing to correct them.

Her advice in regard to feeding bees sugar syrup to produce fine comb honey will probably meet with more severe censure from other hands than mine. The recipe for making bee feed, for which she charged $10.00 (see GLEANINGS, page 8, Jan. No., 1874), we copy from page 33 as follows:—

RECIPE FOR FEED.

> To eight pounds of coffee crushed sugar, add two quarts of soft water, and whites of two eggs; bring to the boiling point over a *slow* fire, being very careful not to burn it. Skim off carefully all scum or sediment that rises, so that the feed, when cool, will be perfectly clear and about the consistency of new honey.

I confess it is a little hard to see how one who is trying to do right should charge $10.00 for such a recipe, but at the same time, I do not know but that it is the best recipe I have ever found offered for sale. You know how I have talked to you about selling recipes in these years past. Well, although this is an excellent bee-feed, whether you use the eggs to clarify it or not, I should hardly like to indorse the following, which we find in Mrs. C.'s book, page 39:—

> The feed is of the same color as the nicest white clover honey, and when put in boxes by the bees with the honey collected from flowers (I have no doubt in many instances in alternate layers in the same cell with honey from flowers), it can not be distinguished, either in color or taste, from honey collected *wholly* from flowers.

Although Mrs. C. does not quite say so directly, we are led to infer that the great yields of box honey she has obtained (over 380 lbs. from a single hive) were secured by feeding the bees with this sugar syrup. This honey was all sold at 35c per lb. Now, if people will buy this honey at 35c, or even 25c per lb., there will be no great difficulty in getting $50.00 profit from a single hive, as Mrs. C. has so long claimed in her advertisements. The hive which she calls the Controllable hive, is only a slight modification of the large hive of Jasper Hazen, and the one later made by Mr. Quinby. It is simply a very large hive, with boxes all over the top and sides, giving ample room for a very strong colony to store honey during a great yield. The chaff hive embodies the same principle, with a permanent winter covering. Why do I consider the book a good one, and wish to extend its sale? Mostly because of one point. This one point is the energy and zeal with which she recommends building each stock up to its fullest strength by feeding with sugar syrup, clear up until the white clover opens. In fact, she insists that the hive be crammed with bees and honey (!), and even commence building the comb in the boxes, and storing some honey (!) in them before they get any from white clover at all. Such a course can not fail to give an enormous yield, as we almost all of us know already. If a little of the sugar syrup should get mixed with the honey, I presume it would do no great harm, for it is not poisonous at all. To get these great yields, she recommends but about a dozen hives in a locality. Now, although the book says nothing of the extractor or comb foundation, it is well worth the dollar for the energy with which she puts the points above mentioned.

A very good picture of Mrs. Cotton is given as the frontispiece of the book; and as one takes a good look at the face of the author (which by the way is by no means an unprepossessing one), it is with a feeling of sadness that so much energy has been spent, at least in part, in a mistaken direction.

STRAY THOUGHTS FROM ORCHARD APIARY.

No. 1.

IMPORTANCE OF GOOD DRONES.

MANY of you have doubtless noticed that, while some stocks will store honey all through the season, others equally strong do nothing. Now, I believe the cause of this is because queen-breeders are too careless in regard to mating their queens. I think it is just as important to have good stock on the side of the male, as on that of the female; and if bee-keepers would take as much pains in selecting their drones as they do their queen-breeding stock, I think the number of idle stocks in the country would decrease every year.

For the past few years I have been trying, by close and careful breeding, to secure a strain of bees that would excel in the three most important points; namely, industry, prolificness, and hardiness. To attain this end, I adopted the following plan: I kept a record of all my stocks through the summer, and marked the ones that stored the most honey under the same favorable circumstances. In the spring I marked those that appeared to winter the best, judging from their condition in the fall, and also those that bred most rapidly in the spring. I then let the marked hives raise all the drones they wished, and kept all others cut off. I then bred from the best imported stock, and mated my queens with my selected drones, and kept a record of them the next year as before. Those that proved the most industrious, prolific, and hardy, I allowed to raise drones, keeping all others cut off. By this plan of the "survival of the fittest," I think I have succeeded in obtaining a strain of bees that are industrious, good breeders, and that will stand this cold climate well. It has taken a great deal of pains and perseverance to accomplish this; but I think the result more than pays me for my labor.

MAKING COMB FOUNDATION.

In rolling fdn. 10 or 12 ft. to the pound, the sheets stick to the rolls badly when they come through, and have to be picked up, which takes a great deal of time and patience. Two years ago I thought of a way to remedy this, which is, to fold a strip of very thin paper over the end of the sheets. They can be put on very fast with starch, and can be taken away from the machine as rapidly as the very thick sheets. The paper can be cut off, and the wax melted up again. I do not think the paper will injure the rolls if it is very thin and properly put on.

WINTERING.

I have four ventilators to my cellar, and by means of them I can keep the temperature very even, not varying more than three or four degrees all winter. I believe it is very important to keep bees quiet while they are in winter-quarters, and for that reason I place my hives on racks which do not touch any partition, but stand on a stone floor, so that nothing short of an earthquake can jar the hives.

E. A. THOMAS.

Colerain, Franklin Co., Mass., Jan. 1, 1881.

PROGRESS.

I SUSPECT that we are just on the point of making one more good stride ahead in our knowledge of bee nature. The word is given almost simultaneously from Minnesota and Florida, by friend White in December GLEANINGS (p. 598), and friend Boutelle, in December No. of the *Bee Journal*. I read the latter's article first, and had a quiet "guffaw" over it. Pretty soon I quit laughing, and came down to sober second thought. Why not? If we may be allowed to assume one fact not yet proven (but not at all unreasonable), there is nothing to hinder the rearing of drones from worker eggs to any extent the bees desire. A bee's egg as first formed has in it a germ that, upon being developed, becomes a male bee. If the egg is deposited in this condition, we call it a drone egg. The addition of a spermatic particle while the egg is being laid produces a worker egg. A worker egg contains two germs. It is not at all probable that the original germ is annihilated or killed by the spermatic particle. It is simply set on a back seat by a new and more vigorous power. It fares just as the lieutenant of a military company does when the captain arrives. *If the captain is killed, the lieutenant resumes command.* Suppose, now, that a worker egg with its two germs be left uncared for for an indefinite period. Sooner or later, both germs would die, and the egg become a mere bit of inert matter. Germs of such different origin and character may differ greatly in their powers of endurance. *If the original germ is capable of living a few hours the longer, a drone may be hatched from it as soon as the spermatic particle dies.* Consider further. There is a good reason why the spermatic particle should perish first. Exertion is exhaustive in its nature; and the spermatic particle, as seen by the microscope, is continually making spasmodic motions—like a little live pollywog. The germ of the drone egg has never been detected by the microscope, but it probably does not keep up such an expenditure of force.

In your reply to friend White, you unconsciously offer further evidence. You remark, "It is not unfrequent to find a queen that suddenly, as it were, lays quite a patch of drone eggs in worker cells, and this, too, at a season when drones are not needed." That the eggs in such cells were laid as drone eggs, is, of course, an assumption. It is more probable that they were laid as worker eggs, and became drone eggs by neglect. When brood-rearing is on the decline, eggs are often neglected, if I mistake not; but a sudden betterment of prospects, as a fresh run of honey, makes the bees desire more brood, and causes them to care for and hatch eggs which they had previously resolved to have nothing to do with. The drone patches, according to this theory, are patches that were neglected just a little too long.

For the benefit of those who desire to follow up this matter, I would suggest a simple way of testing it. Pour a little thin honey into the lamp nursery (in order that the air inside may be moist enough not to dry the eggs), and put in a frame containing only worker eggs. Remove the queen from a good colony until they become rather eager for brood. Give them this frame just before the time when eggs might be expected to perish. If the eggs hatch, and prove workers, try again with some six hours older, and so on until drones result, or until the point is reached when eggs can no longer be hatched at all. The whole could be done at one trial by inserting an inch or two of comb with fresh eggs into the frame every six hours, until enough time was covered.

SOVEREIGNS BORN, VS. SOVEREIGNS MADE.

It is just possible that friend Klar (page 597, of 1880), has shown us, as he says, another step forward, and a still more important one. His fact is, that a queen of very remarkably good qualities was known to be hatched from a worker cell. I agree with you, that the mere position of the larva is not likely to signify much; but that is not the point, necessarily. The true question I take to be this: Is this rearing of queens in worker cells a mere freak of the nurse bees (if so, a trivial matter), or is it a remarkable outburst of the reproductive powers of nature? It is imaginable that, on rare occasions, a larva might have, by birth, such tendency to become a perfect female, such irrepressible royal vim, as to commence developing without any special treatment. As soon as the delicate senses of the bees could detect the royal odor they would naturally give it some royal jelly, and rim out the cell as described. The position would be an unimportant matter, the late feeding and cramped quarters somewhat injurious; but such innate gifts and vigor as would show themselves by refusing to be repressed might well outweigh, by a hundred fold, all the untoward circumstances. It certainly is not asking too much of us to ask us to keep watch for these curious queen-cells, and save enough of them to ascertain what sort of queens they do produce.

DIPPED FOUNDATION.

It certainly looks as if the grand desideratum was on the door-step just stepping in—a simple, cheap, durable, workable, and buyable contrivance, with which anybody with ordinary "gumption" can work up a half-dozen pounds of wax all clean, and do it well. To sell us, each one, a pair of dipping plates, at three dollars, will be a better business than selling a roll mill to one in a hundred of us, will it not, eh? When we get just the right idea about temperature and manipulation and the rest, I believe foundation can be made with a pair of cast-type metal plates, if they are perfectly true and smooth. My first essay, if I could get around to the experiment, would be to use the plates warm, dip in the style friend Bonham does his plaster ones, and conduct the whole operation in a large muffler box, into which the operator could thrust his arms, and view operations through a pane of glass, the air inside being kept nearly up to the melting point of wax.

THE CLOVERS.

Artemas Ward always had to have something in every letter about his "kangaroo." Clover is my kangaroo, and it won't do to close a letter on progress without telling how I have "walloped" it. I still keep my ten different kinds, or sub-varieties, endeavoring to develop each one separately, "not knowing which will prosper, this or that." I raised a large number of plants to select from, especially of No. 4 and No. 9, which are the most hopeful specimens. Have got ahead some this season; but it is likely to be a good many years before the new plant is complete and ready to introduce. I propose to have No. 4 when finished snowy white, as to its bloom, like the original plant; but an immensely large percentage of the seedlings are determined to go back and be red clovers again. I have fair prospects of carrying my point in the end. Space forbids giving details much, but I will add a few notes of tube lengths from my memorandum-book. The average of field plants in June is 42 one-hundredths of an inch.

Clover No. 5.—When found, 36 to 46 (very variable.) Same, June 28th, 36 to 40. Aug. 5th, 32 to 42. Best plant of 1880 marking as low as 32 on July 26th.

Clover No. 2.—When found, 38; June 28th, 34 to 37. August 7th, 23 to 36. Best plant of 1880 marks as low as 30 on July 26th. Diminutive head on another plant, 26.

As I have had a bee empty a filled clover tube for 32 hundredths deep, these figures look hopeful.

THE NEW BEES.

Ah, yes! among the minions of progress are those new Assamese and Brazilian bees—worthless, no doubt; but we shall be very happy while investigating them. Make way for the new bees! But we have also made some progress in getting our eyeteeth cut. We want "piles" of information about friend Hawley before we shell out those ten dollars—es. E. E. HASTY.

Richards, Lucas Co., O., Jan., 1881.

A MAMMOTH BEE-HIVE.

A STORY FROM OUR "A B C CHILD."

I THOUGHT I would report an experience I had this season with a monster bee-hive. Our village doctor, Mr. George N. Hidershide, took the bee fever in June, and, having more money than experience, he jumped right into the middle of it at once. But he was not going to have any small hives, so he hired a carpenter to make a hive for him. It was built to hold 72 L. frames, being the length of a L. frame, and made to take 3 sets high, 24 each. He asked my opinion, and I told him it would be a failure. The hive done was double walled with 6 in. chaff packing, double doors, packed doors opening on flat side of comb, and inner doors glass, making it an observatory hive complete. It looked more like a safe than a hive. It was placed in an upper story of his barn, a hole cut opposite for an entrance, and the hive set up to the hole when all was ready. I was employed to transfer 4 large swarms of blacks into it, also one swarm of Italians, which I sold him with combs and brood, 8 frames filled. These were placed in the center, in lower part of hive nearest the entrance. Then commenced the work of transferring, which was nicely done in about four hours, and the 5 swarms nearly filled the hive. A very close watch was kept up, and all the black queens killed. They united peaceably, having been brought by wagon about 6 miles; the 72 frames containing no brood were filled with fdn. starters, and were put in position and they commenced at once to slay the drones, so that within 12 hours not one remained alive. Three swarms were the large brown bee and one small blacks.

Now for results: The work was done July 12th in the midst of the largest basswood yield. They did not fly much for 8 or 10 days; at the end of that time they commenced to let out, and in three weeks every frame seemed filled with honey. In 42 days they deserted the outer combs, and in 84 days were no larger than any ordinary strong swarm. They had 400 lbs. of honey in frames, and the bees clustered in one corner. Thus we exploded the great and mammoth swarm stories. My ideas proved correct; estimating the 5 swarms at 50,000 each, we had 250,000 bees to start with; the queen, laying her full capacity, 3000 per day, in 42 days we have only 126,000 bees; the disturbance, perhaps, caused the queen to cease laying her full capacity for a few days; this was overbalanced by the transferred brood hatching; the 84th day we found only 50,000 bees. Now for the doctor's figures:—

Cost of hive	$24 00
Cost of 4 black swarms	16 00
Cost of Italian swarm and queen	10 00
Cost of transferring	2 00
Total	$52 00

For the experiment, the doctor still says he is satisfied, as he always believed he could fit up a room and have honey by the ton, and swarms the size of a load of hay, as we read of found in caves and rocks. He would certainly have built his hive four times the size he did had I not advised this smaller one for a start. I hope all persons who believe their uncles and grandfathers had garrets filled with tons of honey and mammoth swarms of bees will, before trying the experiment, stop and drop a line to G. N. Hildershide, M. D., Arcadia, Wis., first, and hear what he thinks of it. E. A. MORGAN.

Arcadia, Wis., Jan. 5, 1881.

Many thanks, friend M.. You and the "doctor" have given us a very valuable experiment, even though it did cost some money. To try to help a little to bear the expense, we have placed to your credit $5.00, and you can give such a part of it to the doctor as you choose. I was pretty well convinced of what the result would be; but with your yield of honey this season I should have rather expected a little more than 400 lbs. from the 5 swarms all together. Perhaps it was because they waited and lost that 10 days in the start. We are all the time finding people as you say, who seem to think it must be that several swarms in a room together would make one mammoth swarm, and hold out thus, year after year.

Juvenile Department.

LETTER FROM A LITTLE GIRL BEE-KEEPER.

I WISH you a happy New Year. I have three swarms of bees. They came out and alighted in the grass, but they are very tame now. I read my father's bee journals, and like to read them. I have all black bees but one, and they are Italians. They sting very hard, I think, but father don't think so. Father has bees also. He has a new hive this winter. I like bees very much, but not if they sting. A year ago papa gave me a swarm, and it increased to two swarms, and did not swarm this year. I like father and mother very much. I like to read and sing. I go to Sunday-school. I like to go to school. I try to obey my teacher. Mamma has no swarm of bees, but would like to have one very much. They are very nice. I am seven years old. I hunt bees with father. I got stung on the finger. Bees gather honey on flowers; we have sweet flowers. L. O. Lindsey is my father. He keeps bees, and they sting very hard, but not so hard as some. Some bees are very tame, and some are wild. The ones that live in the woods are wild, and the ones that live in hives are tame, and don't sting so much as those that live in the woods. The swarm that came out and alighted in the grass is in a red hive. I have two big brothers, and they have one swarm apiece. Papa has more than any; they have plenty of honey; he packs them in chaff: he put two swarms in a dry-goods box, and heaped snow around it. The lightning struck our house on the 6th of November. We were all in the kitchen, but no one was hurt. My brothers had just got home from school. It ran down the rod, and four other places on the house. It tore the rods and eave-spouts off the house, and a stone out of the woodhouse wall, about four feet.

LOUIE M. LINDSEY.

Corry, Erie Co., Pa., Jan. 1, 1881.

Well done, Louie! Why, that is a tip-top letter, and I will go right this minute, and tell Stella to send you one of the best of those Sunday-school books, and you can show it to your Sunday-school teacher, and tell her your friend A. I. Root made you a present of it. Let me see—I guess I will send you the one about the "Buttoned Boots." See if you don't think it funny about the little girl that lost her uncle's watch, and then found it in such a queer place a long while after. Now, if I read your letter to Blue Eyes, I wouldn't wonder if she would write one to you. What do you think about it? Every time you write me a letter telling about your father's bees, I will send you another book (just as I offered Freddie in Dec. No.), and I would like one every month.

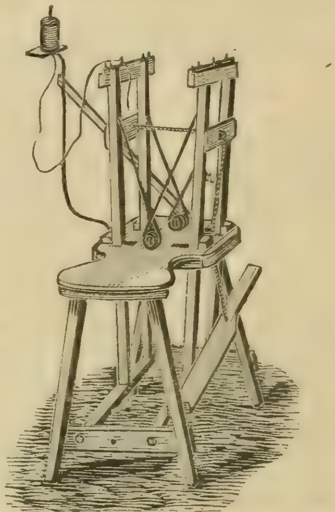
I have nothing of interest for you this month. We are having extremely cold weather here, which will be very hard on what bees are left. The majority of the colonies over the country are dead already, and reports coming in of others dying. We do not know what condition our bees are in, for papa will not let us go near the apiary, or disturb them in the least. We had a Christmas-tree at our church. I got a sack of candy and an orange. The candy was this cheap stuff, painted in all the colors of the rainbow, and not fit to eat. FREDDIE L. CRAYCRAFT.

Salem, Ind., Jan. 11, 1881.

Very good, Freddie, and we have sent you your book. I think your father is just about right in refusing to let you disturb your bees during cold weather. By the way, my little friend, I am almost afraid you are in danger of getting into a way of fault-finding. Sometimes grown-up folks find fault with what God sees fit to send them, and I know a man *real well*, who gets into such ways of thinking and talking sometimes. You see, the candy was a present, and we should be careful how we find fault with presents. If you buy some candy, and it is not worth the money you paid for it, then just "go for" the man of whom you bought it, "lively"; but always make the best of every thing you find on the Christmas-tree. Isn't that the best way?

GIVEN'S DEVICE FOR PUTTING WIRES INTO BROOD FRAMES.

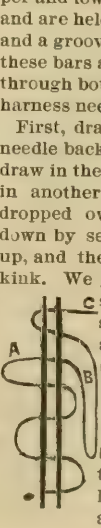
FRIEND GIVEN has invented, as an adjunct to his machine for making fdn. right in the frames, a machine for putting the wires in also. The plan of it seems to be to draw the wires into the top and bottom bars before the frame is made up. The cut below, and the explanation he gives to follow, will, I think, make the general features of the apparatus plain.



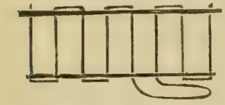
GIVEN'S FRAME-WIRING MACHINE.

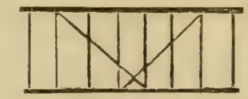
The two arms above the seat-board are separated by springs. They are made to open 13 inches, but the machine can be set any distance under that. They are pulled together by the foot-lever. The upper and lower bars of the frame fit in these arms, and are held by springs on the outside and two pegs and a groove in the inside. When pulled together, these bars are just ½ inch apart. The wire is run through both holes in the pieces at once, by using a harness needle.

First, draw one arm's length through; press the needle back, catching the slack on the other thumb; draw in the slack, and with the other thumb draw in another arm's length; this arm's length is dropped over a very light spring, scarcely seen, down by seat board. This spring will easily pull up, and the wire slips off it, when it's too short to kink. We go on with the first arm's length, and sew back, placing the other thumb in the slack, and pull in the wire off first spring, and put it on another spring on the other side; then we proceed and sew back and forward, leaving slack each time, and fasten the last end with a small tack. The wire is seen about thus: Now, the two thumbs are placed in A, and it slacks; the foot-spring lever is let up, and the long slack is pulled in by the thumbs, and left on the last thumb; this is the



middle of the frame. The spring separates the pieces, and all the slack is taken up excepting what is on the thumb. Now there is almost enough slack on the thumb to allow the pieces to separate to these set distances.





We rub the finger down on the wires, and with the aid of the springs, this slack is soon pulled in, letting the last arms strike first, then what is needed is pulled in from the spool, then we pull in enough from the spool, and break it, to run the angle wires. They are run thus, with us, and the end is fastened on the same tack with the other end.

Hoopeston, Ill. D. S. GIVEN.

◆

HOW TO PREPARE AND DRY CORN.

ALSO HOW TO COOK IT AND ——.

I SEE by GLEANINGS that you wished to know something about drying corn. I do not know that I can enlighten you any on the subject, but I have experimented considerably in that line, and have finally adopted the following as the best method: In the first place, pick off all the silks, and have your corn as clean as possible. Now, do not cook or scald it in any way while on the cob. Take a sharp knife, cut the corn so as to cut the kernel about half way down to the cob, or in other words, cut the kernels in the middle, so that one-half the corn is left on the cob; then turn the knife over; with the back of the knife scrape the remaining corn from the cob. Do not hold the knife as though you were trying to cut with the back; but as you scrape the cob with the back of the knife, incline the edge of it from you, and you will readily see that you will scrape all the corn from the cob without getting any of the cob, and only about one-half the hulls will be cut off with the corn. After your corn is cut and scraped off in this way, place it on plates or any clean tin shallow dishes; then place it in a stove, oven, or other dry, hot place until the corn is cooked which will take but a few minutes. You will know when cooked by the watery appearance, instead of the white, milky appearance it has when first cut off the cob, as it is only the milk that is necessary to cook. If it is not cooked in this way it is apt to sour before it will dry. After it is thus scalded, as I call it, with hot air instead of water, it may be put out in the sun and dried in any way you please; but do not allow it to get wet with rain or dew while drying. Beware of drying by the stove, as a little carelessness will result in getting the corn burnt, which will in a greal measure destroy its flavor.

Now, friend Root, it may not be out of place for me to suggest, that all kinds of dried fruit, and corn not excepted, should be put up in tight paper bags, and kept in a dark room or closet, in order to keep it from getting wormy, as the moths love corn and fruit as well as honey or honey-comb. To prepare dried corn for the table, put it to soak in a little water for a few hours (say over night) before you want to use it; then put on the stove, add a little milk and butter; season to taste, and just bring it to the boiling point, and it is done. Follow the directions, and if you do not like it, sue me for damage.

I have not written the above for GLEANINGS; but if you think it is any thing new, or worth publishing, I have no objections, as I believe the saying, "His light is none the less who lights his neighbor."

T. A. R.

Well, well, Novice, what will you be up to next? You are a funny one, surely, to run a bee journal. First course, honey; second, dried corn, and religion for dessert. But what if you do? bee-keepers can not live on honey alone, and need love to God and man, and to deal justly and love mercy. We are not one of your feminine friends "who have nothing to do," for we are as busy as a bee in a tar-bucket; but yet we have found time to tell you how we dry corn. There is no fruit or vegetable that loses flavor sooner, when pulled from the stalks, than sweet corn and peas. So when we purpose drying corn, we rise early, gather, and boil until the milk is cooked; cut the berries off, and get to drying as quickly as possible. As fast as it is ready, it is put into a pretty hot oven in bread-pans and pie tins piled up zigzag, and stirred frequently. Put in the oven in this way, it will hold all that can be cut off from two bushels of ears.

As the moisture escapes it shrinks, and can be put into fewer utensils, and much less fire will be necessary. If we have attended to our corn faithfully, by night we put thick brown paper in the bottom of the oven, and empty all the pans upon it, except one that remains in the upper part of the oven. We burn coal, and the remaining fire keeps the oven warm all night. In the morning the corn will be ready to put up in brown paper bags, and tied up tightly. Corn dried in this way will be delicious, and not get wormy, as flies have had no opportunity to lay their eggs in it.

We've not a "capacity," but our partner has, and he says that "bees gather pollen from the sweet-corn tassels, and also work for honey upon the leaves—more especially upon the axils close to the stalks, where the dew runs down." The action of the dew and hot sun combined upon the sweet stalks may cause a sweet substance to exude, which the bees gather. MRS. L. HARRISON.

Peoria, Ill., January, 1881.

"Mrs. Lucinda Harrison, as sure as you are alive," said I, as I got to the end of the letter. Well, now, my friend, I am real glad I wrote about corn, for it is the longest letter we have had from you for many a year, and I have written about almost every thing that bears, even remotely, on bee-culture, just on purpose to draw out something good from somebody. Letters from busy folks are just the very best kind of letters—when we can succeed in getting them to write.

CORN AS A HONEY-PLANT (?)

I have just read your article in GLEANINGS, page 11, Jan. No., about corn as a honey-plant, etc., and, although not one of the "feminine friends," I think I can tell you the best method of drying the corn, and would take a contract to furnish you a ton at prices given in circular sent. If you have never used any evaporated fruit, you can not imagine how much better it is than any kind of sun or oven dried. I have used the evaporator described in circular the past season, and believe there is none better; they dry apples, peaches, berries of all kinds, tomatoes, pumpkins, squash, string beans, corn, etc., perfectly. One would, no doubt, keep several of your boys and girls profitably employed some time after the busy time of honey supplies is over. A large crop of berries could be raised for the honey; and what berries are not disposed of profitably green, could be dried at paying prices. Full directions accompany each machine, for preparing all kinds of fruit and vegetables.

I have 46 swarms of bees in the Root Simplicity and Chaff hives, packed in chaff on summer stands; last season was a poor one for honey in this section. The thermometer has been 20° below zero part of the winter, but I have faith that most of the bees will come through all right yet. C. L. BROOKS.

Deansville, Oneida Co., N. Y., Jan. 2, 1881.

Many thanks for circular, etc., friend B. The price quoted on sweet corn is 10 to 15c. At 10c, it ought to sell "lively;" but as dry shelled corn brings only about 2c per lb., it seems to me it could easily be furnished at that price. A real nice brand of sweet corn, such as I have mentioned, would be excellent food even at 10c per lb., and I do not think it would be very expensive, compared with other foods either. Who has some for sale? Go to work and get some ready for market, and I think I can find you customers.

I send you a small sample of our evaporated corn by mail to-day. *Try it.* It is all disposed of for this year, but next year we shall be glad to sell to you if we can agree upon a price. We make this a part of our business—evaporating corn, apples, and pumpkins. N. F. CASE.

Glensdale, Lewis Co., N. Y., Jan. 3, 1881.

The corn is most excellent, friend C., and we could hardly tell it from corn that had just been gathered from the field. If anybody has any for sale as good as that, I should like figures on it.

Humbugs & Swindles,

Pertaining to Bee Culture.

CAUTION TO DEALERS.

MR. EDITOR:—A little over two months ago I received my first lesson, and I think the last one, while I remain a supply dealer in apiarian supplies. Mr. W. L. Woodward, formerly of Salford, Ont., wrote to me, stating to me that he had 275 lbs. of beeswax for sale. I offered him 28c per lb. cash on delivery; but he thought that, as we had had dealings with each other the last two years, I ought to remit first, which I declined to do, as it would amount to $77—he being a stranger to me personally, and I to him; so, finally, he said if I would remit $28 he would forward the 275 lbs. of wax at once, on receipt of money, at the same time stating that two other parties were after it, at the same offer. I remitted the $28 in a registered letter; he received it, and that is the last of it, for he left Salford for parts unknown. He stated he gathered it for me through the country. M. RICHARDSON.

Port Colborne, Ont., Dec. 6, 1880.

After getting the above, we immediately wrote Mr. Woodward, as he is one of our subscribers; but getting no reply from him, we wrote his postmaster, inclosing a postal for reply; but after waiting quite a time without getting a reply, we wrote to a subscriber there, and got the following:—

In answer to yours of the 29th, would say in reference to Woodward, he was not counted a responsible man when here. He took all the honey-comb, and queen bees, and left the others to starve. I heard he went to California, but don't know his present address. He has swindled others as well as Mr. Richardson. He is entirely deaf. If you wish any more information, I shall be glad to give it to you.

Salford, Ont., Jan. 5, 1881. JOHN GREGG, JR.

As the matter now stands, it seems to me that our bee friends need to be warned against trusting any man of the name given above, should he turn up in any new locality. If it were possible to find his address, I should much prefer trying to hear from him personally, especially as his deal with us has always been honorable. The transaction, as detailed by friend Richardson, is of a most aggravating character, and the poor man must have undergone some severe temptations before he yielded to this bad impulse. If any one can give us his present address, I will do all I can to help him to reconsider his bad start, and come back to the right again.

Now, friends, allow me to suggest, in similar cases, where you do not know each other, you just send your money to a bank and direct them to make the purchase, or put the whole transaction in the hands of the express company. You can do this, and still have the wax or honey shipped by freight.

It seems that Mitchell is not out of business yet, for two circulars, dated Jan., 1881, have been sent in by friends who have received them. I find nothing that requires notice, except the following on a little slip of paper, pasted in the front:—

NOTICE.

We would announce to the bee-keepers of the following-named Counties—Randolph and Jay Counties, Indiana; Mercer, Auglaize, and Shelby Counties, Ohio, that we will visit the counties named as follows:—

Portland, Oswalt House, Tuesday, Jan. 11, 1881.
Celina, Miller House, Wednesday, Jan. 12.
Wapakonetta, Heinrich House, Thursday, Jan. 13.
Sidney, Read House, Friday, Jan. 14.
Winchester, Franklin House, Saturday, Jan. 15.

We extend a cordial invitation to every one that is interested in the busy bee to call on us; and we would say to those who are using our hive, or any part of it, without a right to do so, that you are requested to meet me and settle up, or we will bring suit in the U. S. Court against you. Many of you have said that we have no patent on our hive. If you will call, we will show you our patent. We request our friends to report all infringers. Any parties using the so-called Root's Chaff Cushions are infringers of the worst kind. We are sorry that we are thus compelled to assert our rights.

N. C. MITCHELL.

Well, I am sorry too, Friend M. I had hoped you would come out straight too, and that we might take the head of this department and put it away up on a high shelf, perhaps never more to be needed. I can hardly think any of our new beginners will be so foolish as to pay you for the right to use a division board when you do not even speak of making me settle. You know I am infringing the "worst kind."

Heads of Grain,

From Different Fields.

SHOULD DOLLAR QUEENS EVER PRODUCE BEES NINE-TENTHS BLACK?

FRIEND ROOT:—The queen you shipped me May 1st came all right. I removed the queen from a populous stock, and introduced her in a cage 48 hours, and then released her, when she was received all right. I looked at her in about an hour, and shut up the hive for good, thinking it all right; and ten days after I found her dead at the entrance. I opened the hive and found just one queen-cell, and no eggs nor larvæ. I ordered another dollar queen, and from her progeny there is not more than one bee in ten that shows the Italian mark. Where did she come from? Perhaps it is too much work; but why is it not well to keep track of dollar queens—where they come from, and then we would soon learn who breeds for purity. I don't find any fault, but some one has got their Italians strained down below par.

It is my opinion friend L., that no queen raised from an imported mother should do as badly as that; yet the results of crossing are so diverse that it may be possible, after all. We have the names on a book, telling where every queen we have sold came from, and we have decided pretty well already where we can not afford to buy in the future. There is talk now of guaranteeing the purity of all dollar queens next year; and if we do this, queen-breeders will be pretty sure to get the black bees out of their neighborhoods more effectually another season.

EAVE SWALLOWS EATING BEES.

The eave swallows have made havoc with my bees for a few years past. They nest about ¼ mile away, under the eaves of the barns, over a running stream of water; and to get rid of them I know but two ways. One is to shoot them; the other is to take a long pole and teach their young to swim before they are old enough to eat bees. The old swallows catch the bees to feed their young. I tried the former way, and it cost me a dollar to kill sixteen with powder and shot, and I am a good marksman too. At that rate it would cost several hundred dollars to get rid of them, besides my time. That won't pay. Please inform me of a better way.

Are you positively sure, friend L., that the swallows were eating bees? It is well known, that they destroy large numbers of insects, and I think we should be very careful before we decide upon such a destruction of them as you speak of.

ARE BEES FOND OF PARIS GREEN?

Is it careless to use Paris green on potato tops, in the vicinity of my bees?

I do not believe bees will ever touch Paris green unless it is mixed with honey or syrup.

UPPER ENTRANCES, AND POLLEN.

Are bees more apt to carry pollen in the surplus boxes when they have an upper entrance?

An upper entrance would certainly make it more likely to have pollen stored in the surplus receptacles.

VIRGIN QUEENS.

Will bees accept a virgin queen the day they swarm? If so, please inform me. I introduced several last season, but not one lived.

The bees that have swarmed out will almost always accept any kind of a queen; but those that remain in the hive are just as likely to refuse a new queen as if no swarm had issued, so far as my experience goes.

I went into winter-quarters with 17 stands of bees—one in chaff hive, 11 set in boxes packed with chaff, and 5 exposed to the weather, one of which is frozen up solid. Zero weather here for the last three weeks. Mercury 22° below zero—the coldest yet. No signs of a thaw, and very short of water.

E. W. LUND.

Baldwinville, Mass., Dec. 15, 1880.

AN A B C SCHOLAR'S REPORT.

I commenced with 2 swarms, which I took on shares in 1877; but the story would be too long if I told the ups and downs until now. I will say, if I had taken the A B C or GLEANINGS, I could have made a better report. I have sold over $100 worth of bees; had last year 1000 lbs. surplus; this, 1500 (500 extracted, 1000 comb;) sold for 12½ extracted, 15 to 16 in sections. I have now over 80 swarms in the cellar. By the way, I have always kept my bees in the cellar, in the winter, I mean, and have never lost a swarm by disease, and but one in any way, and that was by using an old hive with a mouse-hole in it. You can guess the rest. One year ago last winter many lost their bees in this vicinity. One of my neighbors lost 21 swarms—all he had. I saved 31—all I had. This year was a poor one with us here; no surplus until about the 10th of August. My surplus was all from less than 40 swarms. One made 144 lbs. in large frames, my best.

D. HOUGHTALING.

Dimondale, Eaton Co., Mich., Dec. 26, 1880.

ARTIFICIAL AND NATURAL QUEENS.

As friend Doolittle is saying so much about dollar queens, I wish to say a word. Now, I feel sure that queens raised according to the rules in the A B C are better than queens raised under the swarming impulse. Bees often swarm without having started a queen-cell; the swarm finding themselves queenless will set about raising queens from larva that is ready to be capped over for a worker. The result is, you have a queen about half worker. She will live about six weeks, and die. Then what is the matter? Don't know. Mr. Doolittle says that the queens raised according to your plan are raised by old bees. I think not, for young bees are hatching every day, and many of them have just learned their course. Now, queens raised in the natural way, I think, are often put on short rations, for the hive is full of brood, and the bees have all they can do to give them all a little. I shall raise all of my queens according to the A B C book. I don't wan't to find fault with friend Doolittle, but I don't think he ought to be quite so stiff in the neck, and hang off so much on one side. I don't raise queens to sell—probably never shall.

G. A. WRIGHT.

Nicholson, Wyoming Co., Pa., Jan. 12, 1881.

Gently, friend W. You know friend D. gets the honey, and as long as he does that, he has a right to be "stiff-necked" if he chooses. When we do as well as he does, year after year, we shall have earned the right to be so too; but as it is we are glad to hear from him, even if we do not just exactly agree with all the deductions he makes.

RED CLOVER AS A HONEY-PLANT.

Friend Doolittle says (on page 21, present Volume), he thinks "there is nothing in the world that secretes as much honey, year after year, as red clover." In this he is perfectly right; but when he says, "Still, it is of little use except to the bumblebee," in my mind he is a little wrong.

What were the bees doing when friend Doolittle "got off his mowing machine"? (See GLEANINGS, page 152, Dec. No., Vol. III.) There he tells us, Italians were working on red clover, four miles from their home, and he even saw black bees working on that same red clover.

You have my views on page 164, GLEANINGS, May No., Vol. VII., and I still think that if we have good Italians there is no honey-plant equal to red clover. But the heads must be small, or the corolla will be "so long the bees can not touch the honey."

I will tell you how to manage it. A few years ago I was crossing one of neighbor Henry Root's fields, and there I found our nice Italians, and hybrids too, working. Why! the whole field was a perfect hum. I wondered why they did not work on my own fields; but I soon found out the cause. We had always sowed our seed too thin, and the ground was rich; consequently, the heads were large.

Moral.—Get your neighbors to sow more seed than usual, even if you have to furnish the extra seed gratis. It makes better and finer hay, does not freeze out so easily, and in no way interferes with raising seed, and you will be delighted and well repaid. ILA MICHENER.

Low Banks, Ont., Can., Jan. 10, 1881.

A NEW WAY OF STOPPING ROBBING, ETC.

I started last spring with 27 stands, all Italians, except one black and a few hybrids; lost none through wintering the last two years. I winter them on summer stands, with chaff on top of frame, which I think is a good way in this part of Pennsylvania. I do not keep bees for profit only, but more because I like them. I increased by artificial and natural swarming to 40 stands, and got between 800 and 900 lbs. of honey, all comb, in frame and sections; also some in boxes. The season was so poor that I have to feed some of my first natural swarms that came out as early as May 9th, and are not self-sustaining; but I expect to get them all through. A good many of my neighbors did not get any honey at all. We have to depend on clover entirely for surplus, and the nectar failed, and hence a poor season.

The queen which I received from you some time last July proved to be pure and prolific.

I will here give you my way of curing robbers, which always proves satisfactory to me whenever I try it. When the robbing commences, and the stock to be robbed does not fight the robbers away, I close up the entrance pretty small; then I take a small piece of broom corn (which I like best) or quite a little whip, and stick it in at the entrance, and shake it pretty often. That makes them so cross that they will mount a robber before he is halfway down to get in; but put on a veil, or they will take you for a robber. If they have full sway of a colony before I find it out, I close it up entirely till next morning, when I make them defenders before the robbers are up. Sometimes it must be done pretty often before they stop it.

BLACK WILLOW.

You spoke about a willow-tree on page 599, in last No. of GLEANINGS, that was budded with a kilmonark. That willow is called black willow about here. I have raised from just such a nursery tree, budded the same way (and the top dried), a good many trees. They produce the earliest natural pollen (and honey too) that the bee can get in spring. They are raised the same as grapes, by cuttings, and grow very fast, and will bloom about a week or two. Mine are just swarming with bees almost as soon as the ground opens in spring. I generally top my trees in the spring after the pollen is all gone. I will send you some cuttings if you wish to have some.

VAL. D. URICH.

Myerstown, Lebanon Co., Pa., Dec. 28, 1880.

A LAW AGAINST FRAUDS IN WEIGHT, ETC.

I inclose $1.00 to continue GLEANINGS. Will you not urge all your readers to join in petitioning, through their representatives in Congress, for a law to protect us against short weights, short count, and short measure, and particularly against adulterations in all we eat, drink, or wear? that Congress pass a law requiring that every package destined for sale shall show exactly its weight, measurement, count, or composition, so each consumer can see exactly what he is buying, selling, or using; so the people may know exactly what they are using, and the pure and the adulterated articles would be put upon their individual merits, and there could be no premiums in the way of profits to deception and dishonesty? Without such restriction, these evils must go on increasing, until every pure article of consumption will necessarily be driven out of the market, and the buyers left entirely at the mercy of dishonest manufacturers and speculators. Surely, Congress can not refuse to grant us such relief if the people will show that they need it.

W. R. WHITMAN.

New Market, Ala., Dec. 27, 1880.

With all my heart, friend W., and, while Congress is getting around to it, let us, each and all, reform ourselves in every thing we make or sell. If any one has a "peck measure" that don't hold out, let us "burn it up."

CROSS BEES GATHERING MOST HONEY.

I wintered four swarms last winter. They increased to nine, and made 200 lbs. of comb surplus honey, most of it in 1-lb. sections. Mine are common blacks, and the best swarm to gather honey is the worst to sting me if they can get a chance, and they watch close for a chance too, unless the honey is coming in freely.

WINTERING WITH BOTH CHAFF AND CELLAR PROTECTION.

My bees are wrapped up in a cloth, and oat chaff is packed around them, top and sides. They are in Simplicity hives. I took out the brood frames, and took a cloth that would go over the remaining frames and down on the sides to the bottom-boards, and then packed in the chaff. I wintered them in my cellar last winter, packed in that way. My cellar is damp, but my bees were dry all winter. The chaff took the moisture, and I never had so few dead bees, nor had them winter so well before.

I sent to you last spring for hives and other fixtures, and they came all right and were satisfactory, and the freight charges were quite low; and, as luck would have it, my order went in when the rush went, and the consequence was, that I had to hive some of my bees in my old box hive without any brood frames.

ONE AND A HALF STORY HIVES.

I like the one and a half story Simplicity with the 28 one-pound section-crate very much; but I should like it better if the cover, or the upper story, was high enough to take on two sets of those crates, and then, when the bees have got far enough along, raise one crate and put one under. H. M. GUILD.

Chester, Windsor Co., Vt., Dec. 17, 1880.

A story and a half hive, with two tiers on, would be virtually our regular two-story hive, friend G.; and if you will look into the matter, you will see that it would make a much more complicated and convenient rigging, to make the cover still taller, and get your boxes properly held in place, than to make another story, just like the lower one, in the usual way.

ADVERTISING IN THE READING COLUMNS.

What in the name of common sense has come over some of the bee papers? I refer principally to the unbusiness like "free space" given through the reading columns of certain bee papers, which are nothing more than covert advertisements. For instance, something like this:—

> "I received 2 blank queens early this spring, from Mr. Blank Blank, and although the colonies containing these queens were no stronger, and had no better chance than Italians that were alongside of them, they gathered more honey, and were easier to handle than the Italians. BLANK BLANK.
> "Blank Blank, Oct. 13, 1880."

Now, I would ask any one (except the two Mr. Blanks) if such is fair dealing with advertisers and subscribers? If so, I have not another word to say. I have noticed that other journals, representing other industries, do not wrong their patrons in this way, and am free to confess that I can't understand why bee papers can't do business on business principles. GLEANINGS, I lay no charge of this kind to you, and yet I should fear to scrutinize your back pages too far upon such a search, for fear I *might* find some.

Right here, I firmly believe, I should throw the pen aside; but a "wee small voice" says, "Tell brother Root for *this* time, 'don't advise us to have charity.'" Charity is one thing, and business is another; and let us place each under its proper heading. R. C. TAYLOR.

Wilmington, N. C., Nov. 10, 1880.

But for all your caution, I fear I shall ask a little charity, friend T.; not only for the journals, but for their contributors. Where a letter is written, plainly with the intention of advertising, I shall refuse it, even though I am offered more than our regular rates for every line of it. In fact, advertising dodges shall not go into the reading columns at any price; but where a bee-keeper, in making his report, naturally speaks of the supplies he has purchased of different ones of our number, I have no objection to his doing so. How else shall we know who does business in a careful and conscientious manner? I know the editor may be accused of partiality in so doing; but if he is conscientiously working for the good of his readers, the best he knows how, he should not be troubled, even if some fault is found. I have all along been in the habit of freely advertising articles of *great* merit, where I thought the owner was conscientious and unselfish. I advertised friend Given's press that way, and I also took the liberty of criticising it afterward. Do you not wish me to do just this way?

UPS AND DOWNS OF AN A B C SCHOLAR.

I have kept bees more than thirty years, but in the old box hive, and on the old-fogy style, until the spring of 1875, when I began with the Langstroth hive and two stands of bees; increased from 2 to 6 stands, but got no honey this year. May, 1876, started out with six stands; increased, mostly by dividing, to 15 stands; took 600 lbs. of honey, mostly extracted. May, 1877, began business with 15 colonies; took 1460 lbs. extracted, and 40 lbs. comb or box honey; increased my stock from 15 to 35 stands; lost 5 stands in wintering; came through to May, 1878, with 30 live stands; took this season 2300 lbs. extracted, and 50 lbs. box honey; increased my stock from 30 stands to 75, mostly by dividing, but had only a few swarms. Packed them for winter on their summer stands in the best condition I ever had bees—at least, that was my conviction. But, alas! May, 1879, found me with but 15 stands alive, and 4 of them nearly gone, and more honey left in the hives with the dead bees than I knew what to do with. I extracted 400 lbs. of honey, made by dividing 6 new stands; lost, in wintering, 7 stands. May, 1880, I had but 14 left alive. Got no honey this year, but increased my stock to 28 stands. Just before the weather turned cold, I packed them snugly in the cellar in a dark room by themselves, to stay until some time next April, dead or alive.

J. C. PHILLIPS.

Westchester, Butler Co., O., Jan. 1, 1881.

CALIFORNIA NOTES, ETC.

We have had a long, steady rain, which has started the sages and early honey-plants; and if the weather continues warm and damp, bees will be making their own living in 6 or 8 weeks, and early swarms will be coming out by the first of March. The indications are now good for the best honey season we have had for several years; and you need not be surprised at reports of 200 and 300 lbs. of honey to the hive. Bee-men are happy, and hive-making will soon be the order of the day.

WHICH IS THE BEST SMOKER?

Now, Mr. Root, I want a smoker—one that will burn anything, from dry rotten wood to stovewood; make lots of smoke; blow the smoke well in any position; not get out of order every five minutes, nor go out as soon as laid down. Now, what kind would you advise me to get?

I have had roses in bloom all the year, and the bushes are now sending out buds in profusion. Corn, potatoes, and early garden stuff are coming up. Now beat that if you can in Medina.

Carpenteria, Cal., Dec. 19, 1880. E. CADWELL.

Really friend C., I wish you had not asked me that question about smokers; for I would much rather you would, after looking over the prices of different makes, order the one you think you would like best. What shall I tell him, boys? Somebody having no smoker for sale, please answer.

AN A B C SCHOLAR'S EXPERIENCE.

I thought I would say something about my bees. I have 25 stands of bees. I began in the spring of 1879 with 2 stands; in the fall I had 6. That was a very poor honey season. I got no honey, but fed 100 lbs. of sugar; so you see I made nothing that season. In the spring of 1880 I bought 10 stands, $5.00 each. Another very poor season; had 16 in the spring of 1880; took 100 lbs. of cap honey. I took that in May; got no more that season, but fed some sugar in the fall. I started in the winter with 25 stands. I put 16 in boxes; packed hay all around the gum; put cushions on the frames; left 9 on their summer stands; those I left on their summer stands were the strongest and best stands. They have had two flies since I put them away for winter, while those in the boxes have had no fly at all; but they all seem to be doing very well. I don't know whether to let them stay in the boxes when spring comes or not. As soon as sugar-making comes on, I will commence to feed, as my bees didn't breed later than August. I fed them in the fall, but they didn't commence to breed. My bees were not as strong as I would have liked. White clover was a total failure both years. I do hope next year will be a good one for honey. The honey I took in May was from poplar. GLEANINGS is worth all it costs. It is very interesting. D. F. STEELE.

Gosport, Owen Co., Ind., Jan. 2, 1881.

BOTTOM-BARS TO FRAMES, MADE OF THIN HOOP IRON.

I am an A B C student, but have no other than the old box hive, and wish to make a beginning soon, if I have to make my own hives and frames. How would a tie used for baling cotton do for the bottom and sides of a frame, riveted to a wooden top-bar? When dipped into melted wax it would not rust. J. H. RODERICK.

Dodd's City, Fannin Co., Tex., Dec. 25, 1880.

Frames made as you mention will do very well, only that they are liable to be bent, or the comb injured in setting them down; in fact, frames may be, and have been, used with no bottom-bar, and there is no objection that I know of, except the liability to injury while handling. The general verdict, after a time, is, I believe, that a light strip of pine is best, all things considered. You see much depends on the bottom-bar, to keep the rest of the frame straight and firm.

PAPER HONEY-COMB, ETC.

Won't you induce Mr. Gray to make a machine that will turn out artificial honey-comb *complete*—made from shellac tissue paper, and in a way similar to that described in Quinby's "New Bee-Keeping," which uses tin? I am sure it would be a success, for I have used a small square of hornet's-nest comb, inserted in ordinary brood comb with success. After "uncapping" it to ¼ in. depth of cell, I just dipped the rough edges in melted wax, to make the bees think they were composed of that material all the way to the bottom. The shellac would serve to hold the strips together in this case, as the solder does in the other. These little bottomless cells could then be stuck to a flat sheet of shellac paper (one set on either side), then by touching the edges to melted wax your comb is finished. The machine should turn out these bottomless cells in webs of a certain width, and an indefinite length, like a loom, in order to make it pay. Don't let Mr. Gray alone till he produces this comb, for it is almost impossible to make a paying business of producing honey, without some such cheap comb, and which can not be destroyed by worms. F. DELLA TORRE.

Aiken, S. C., Jan. 1, 1881.

Your experiment has been made before, friend D., and it is pretty well known that it will succeed. You are right; if some sort of fdn. could be produced that needs only to be dipped in melted wax to make it ready to hang in the hives, it would be a boon indeed. The difficulties so far have been that the bees would object, and tear out our artificial substitutes. The fact that hornet's-nest comb will be used by the bees, is a fact that has often made me feel something of the kind, made entirely of the same kind of a papery substance, would eventually be the thing used. Making it in the way Mr. Quinby made his tin combs is too slow, and it does not give us the proper shape for the bottom of the cells for economy of space and material in the bee hive.

BEES ON COTTONWOOD, ETC.

I see on page 41, Jan. No., 1881, that friend C. W. Kennard wishes to know if bees work on cottonwood. They certainly do; but whether they get only pollen, I can't say. I have a large cottonwood within 20 feet of my shop, and in early spring, when it blooms, it's a sight to see the bees work on it. The bloom is easily blown off, and I have seen 5 or 6 bees on one flower on the ground.

Friend Root, I am so glad friend Given is among us again! don't let us lose any of these bee veterans and inventors. I can't do without GLEANINGS, and don't want to lose their counsel.

WINDMILLS.

Friend Root, can't you give us an article on windmills? Tell us all about a 2 or 3 horse-power mill, the best and easiest managed—price, etc. A. S. DAVISON.

Aullville, Lafayette Co., Mo., Jan. 5, 1881.

As our older friends remember, GLEANINGS was first printed on a press that ran by wind power; and, in fact, our whole bee-hive factory was run in the same way. So long as I did the work myself, and could wait until the wind blew, it answered very well; but when I was obliged to hire hands, and they were obliged to wait, or work with a low and irregular speed, it began to be rather expensive. If I am correct, there is no way yet invented by which wind power can be made to give a regular, steady motion like steam, although it will do very well when there is wind enough, as there is many days in the spring and fall. The wind is also much more reliable in some localities, as on the prairies of the West. Pumping, and grinding grain seem to be the legitimate work of windmills at present; sawing wood can sometimes be done very profitably by wind also.

HONEY FROM COTTONWOOD-TREES, ETC.

I think bees get little or no honey from cottonwood in this locality; but I do know that they get a "right smart chance" of propolis (see A B C, p. 145) from cottonwood in the spring.

Bees have had only one fly since about Nov. 15th. I notice one or two colonies have been coming out this cold weather, and have specked the snow badly. Almost all of them fail to get back into the hive. All are chaff packed. The colony with imported queen has not lost over 25 or 30 bees so far.

J. B. McCORMICK.

Neoga, Cumb. Co., Ill, Jan. 10, 1881.

DO BEES WORK ON COTTONWOOD-TREES?

is asked in this month's GLEANINGS. I will answer for one. They do, and in large numbers, creating that joyous hum we always hear when the liltle fellows are gathering pollen freely. The bloom is similar to the willow, except much larger. It produces no honey; but I think that a few large trees near the apiary is quite a help, as it blooms just after the elm. There are two kinds; one produces light yellow, and the other dark red pollen. S. A. SHUCK.

Bryant, Ill., Jan. 5, 1881.

ANOTHER REPORT FROM COTTONWOOD.

Bees do work on cottonwood, especially the "bitter" kind. There was a great flow of the so-called honey-dew on the cottonwood this season about me for miles around—so that it dripped from the leaves.

H. H. C. BREECE.

Greenwood, Custer Co., Col, Jan. 10, 1881.

MEDICATED HONEY, ETC.

My bees are flying to-day, but there is nothing for them to gather. The first two weeks of this month they carried in pollen rapidly from the "broom" weed. The years 1879 and 1880 were exceedingly dry here, and the honey crop was consequently short. In some neighborhoods, however, the yield was very good.—I will say in regard to medicated honey, that I have taken some 300 lbs. of honey this fall, gathered from the senna flower, but can not discover any of the medicinal qualities of the leaves in it.

W. A. McPHAIL.

Pleasanton, Atascosa Co., Texas, Dec. 27, 1880.

THE FARIS MACHINE.

In January No., page 29, you say you have not decided that the Faris fdn. machine is a success. We have made it a success; we got a frame *cast* to hold the plaster. We can turn out fdn. as perfect and as fast as any roll machine in use. It will not sag in warm weather, and the bees work it out faster than that made on the rolls, as it is softer, and the grain of the wax is not broken.

Bees that are in chaff hives are wintering as well as could be expected. This is a very severe winter.

J. RUSSELL.

Lifford, Ontario, Can., Jan. 9, 1881.

I am very glad to hear of your success, friend R., but I think you will find the plaster plate objectionable before you have made very much of a quantity of fdn. I presume a cast-iron frame, properly made, would go a great way toward remedying the difficulties I have mentioned.

CHAFF HIVES; BEST POSITION FOR THE ENTRANCE.

Friend Root:—I have been engaged for some time manufacturing your chaff hive, from a pattern you sent me some time since. In so doing, I have been led to think considerably about its construction. It is certainly a grand hive, ingeniously constructed. But while it is almost without a fault, I have been led to change it a little to suit my own notion. It may not be considered by you or others any improvement at all, for, you know, doctors differ, and so may apiarians. My improvement, or, we may call it, change, consists in placing the entrance, not in the *end*, but in the *side*. According to model sent me, your entrance is opposite the ends of the frames, in the lower department. This necessitates the bees traveling the entire length of the hive to deposit their load, when engaged in filling the back ends of the frames, and this distance is augmented still more when engaged in filling the back sections in the upper story, making a distance of about three feet they have to travel in going from the entrance to the upper sections. This distance must, of course, be retraced. We have thus a distance of about six feet that every bee must travel in depositing its load, and returning. This distance is considerably reduced by placing the entrance in either of the sides, so that the bees will strike the center of the frames, whenever they enter the hive. I know it may be replied, that the *tunnel* is longer, through which the bees have to pass to strike the sides, than to enter at the ends; but this distance is considerably less than to travel the whole length of the frame. Besides, it improves the wintering qualities of the hive, and will enable it to be used in carrying out Mr. D. A. Jones' idea about perforated tin or zinc divisions, to prevent the queen from depositing eggs in the same comb in which the workers are depositing honey. Still further, it obviates the objection sometimes urged about the eave of the cover causing the rain to fall more violently on the entrance than on the other sides. I have been manufacturing the hives, modeling them after the above notion. If you think these suggestions worth any thing, give them a place in GLEANINGS.

WM. BALLANTINE.

Sago, Muskingum Co., O., Jan. 10, 1881.

The position of the entrance, not only in chaff hives, but all other hives, has been much discussed. While there are some reasons besides the ones you have mentioned for having the entrance at the sides of the combs, there are other ones for having them in the way Mr. Langstroth gave us the hive called after his name, with the entrance at the ends of the frames. I believe it is generally thought that the bees gain access to any of the combs more readily by this latter plan than by the other way, and that they also have less trouble in hot weather in ventilating from the entrance, as no other means of ventilation is, as a general thing, now used. For the same reasons, it has been suggested that an entrance at the *sides* of the combs is a warmer arrangement for winter. I confess, friend B., I can not quite see how the bees are saved very much travel by one arrangement more than by the other.

THE PEET CAGE.

I commenced this letter to tell you about my success with the Peet cage. Last season I used it altogether, and of all the queens I introduced in my apiary, I lost but two. I sold 53 queens to J. J. Rohrer, South West, Ind., that I introduced the same way, and lost but one, and there was not one lost out of 42 others that I sold to different ones of my neighbors, and introduced myself. Now, remember, those queens were introduced at different times of the season, and to all different kinds of bees. Friend A. P. Blosser, of Goshen, Ind., had the biggest loss of any one I know of. Out of about 50 queens bought from me he tells me he lost six or seven, introduced with the Peet cage. To take everything into consideration, I think the Peet cage comes very near being just the thing. I. R. GOOD.

Nappanee, Ind., Jan. 10, 1881.

EXPERIMENTS WITH HONEY-PLANTS.

I send you a few seeds of the *Iris Lævigata*, a plant of the order of touch-me-nots, but much more beautiful, and a great *bee-plant*. The *Rural New-Yorker* sent me six seeds; only three of them came up, and the bees were sucking them till the great frost in November. I sowed two rows, 300 feet long, in sweet Basil. I have gathered over a peck of them to sow next spring. They are good bee-plants. I sowed two acres in Alsike clover from August to middle of September last, and turnips with the clover seed, so as to come on in succession. I sowed a great many Spider plant seeds from the five plants that came up. I shall sow 4 bushels of silverhull buckwheat, beginning, as soon as all danger of frost is over, with a half-bushel, and continuing with the same quantity every 8 days till all is sown. I sow on highly manured land. In like manner I shall plant 2 acres of the great Russian sunflower. I have planted out upwards of a thousand Cuthbert raspberry plants, but not more than 50 will be of any benefit to the bees this coming year. I have sown five acres of land of Italian-clover seed with wheat. I have saved a great many Susette Fontaine mustard seed to sow in the spring. A little cousin of mine in Mississippi sent me a few seeds in 1878, in a letter. She says that it is a cross between the colewort and mustard. Be that as it may, it has leaves about 2 feet broad, and it grows from 8 to 10 feet high in good rich land, and is the strongest mustard I ever tasted. I will send you some if you wish them. On the sides of our roads we have growing a plant which grows about 2 or 3 feet high, blooms very early, and remains in bloom till checked by the frosts about the last of November; we call it sheepmint. It is a great bee-plant, and so is the mustard. Did you know that bees gather honey from the bloom of the tobacco-plant? I raise a great deal of pearl millet. When in bloom it gives the largest quantity of pollen, and a great deal of honey where the fodder comes from the stalk. The sourwood, tulip poplars, and Judas-trees flourish in great quantities on my farm, Sequoia. The violet-colored lavender, and the broad-leaf thyme, of which I sow a great deal, are splendid bee plants. Well, you see this A B C scholar is providing magnificently for his Italians, even growing five acres of grapevines in the Concords, the Dutchess, the Lady Washington, with gooseberries, currants, and Kittatinny blackberries; and yet he does not know that he has a single bee living. The last time I saw them was on the 16th of December. I fed them well, gave them 2 lbs. of coffee sugar, A No. 1. They were very lively then, and appeared like 2 large swarms. That in the Simplicity hive was rather the larger. I have a splendid house for them, well covered and inclosed; stuffed around the hives with oak leaves up to the top, with separators and cushions in the large hive, two doors, with lock and key.

WASHBOARD BEE-FEEDER.

I sawed a common washboard, that was not tinned in two parts, each holding 1 lb. of dissolved sugar. None get drowned in these. WM. S. FONTAINE.

Reidsville, Rockingham Co., N. C., Jan. 4, 1881.

I fear, friend F., some of your investments will be only money out of pocket. Our half-acre of Mammoth Russian sunflowers hardly attracted the attention of the bees at all. I have also expended nearly $50.00 for raspberry plants, and got nice fine plants too, but I do not believe one in ten is now growing. Go carefully, boys, on these new things.

THE COLD WEATHER IN WISCONSIN.

The mercury froze up again last night at 10 P.M., and continued to be in that state until 8 A.M. to-day. I think that it probably would have shown 50° had we any way of measuring it. This is the coldest spell ever known in this country. Since the first it has not risen above zero during the day, and has ranged from 30° to 40° below every night. Can bees be expected to come out alive out on summer stands? Mine keep up a buzzing noise all the time, but I think it will give them dysentery. Birds, fowls, and pigs, are freezing to death. E. A. MORGAN.

Arcadia, Wis., Jan. 10, 1881.

I do not think the extreme cold will harm the bees if colonies are strong and well packed in chaff hives, friend M. The buzzing is all right; they always do this when it is so very cold, and I do not think it will result in any great additional consumption of honey, if protected as above.

INTRODUCING QUEENS.

The three queens which I bought of you last fall, were introduced to colonies in the following manner with success: Deprive the bees of their queens as usual; take hive, bees, and all, indoors; take all their frames out, and place them around the hive in any way so their frames will be secure. Bees will soon fill themselves with honey, and begin to look up their queen. I then place the cage containing the queen to be introduced near them on the floor. The bees will soon cluster on the cage; then replace the frames; shake the bees off the cage in front of the hive; release the queen, and all will enter, apparently with joy. Carry the hive to its former place; raise the window and let the remaining bees go home, and then the work is done. WM. PARMERLEE.

Bean Blossom, Ind., Jan. 11, 1881.

Taking the bees away from their hive, or away from their combs, will often make them accept a queen when they would not otherwise; but it can be by no means relied on in all cases. Reports of such experiments are valuable, inasmuch as they give us facts that enable us better to understand the habits and disposition of bees. Many thanks, friend P.; but I would not advise you to risk a valuable queen thus, without careful watching.

MAKING AN ARTIFICIAL SWARM IN APRIL UNINTENTIONALLY.

I can't find any thing in A B C or GLEANINGS that fits this case: Last spring, the latter part of March, a neighbor had two black and one Italian stocks of bees standing on their winter stands, on the south side of a building. About the 1st of April the two blacks were moved 10 rods away to their summer stands, and the Italians left for parts unknown for want of stores (too early in the season to live out here.) The hive that the Italians occupied was left on the winter stand, with empty combs. Bees came back from the blacks that were moved to summer stands, and occupied the empty combs, and I suppose must have carried honey enough from the original hives to live on till they commenced work out of doors. They carried in honey and pollen enough to partly fill 5 Gallup frames. They lived that way for a month, when I introduced an Italian queen. She was accepted in good faith, and still lives, and they are a thriving colony. There are no bees near that could have come from any other yard. Some of your readers here would like to know how it was done. **George E. Northrop.**

Southport, Fairfield Co., Ct., Jan. 13, 1881.

It is all very plain, friend N., except on one point, and this is, the difficulty of explaining where the honey came from to sustain them, until it could be had from the fields. Unless you know positively to the contrary, I would suggest that the Italians swarmed out, before they were quite out of honey, as they often do in early spring, when weak. The blacks came back to their old stand as a matter of course, and, finding no hives, both went into the only hive remaining, and finding at least a small patch of brood, went to work to take care of it. The stocks moved were probably quite strong, and so the two together make a very fair new swarm. As they were all flying bees (the whole force of two colonies), they gathered and stored honey from the first bloom out; and, having little brood to feed, filled the frames, as you state, very quickly. Either they failed in raising a queen, or your fertile one killed her, and then they were a fair colony. I have once known bees to carry all their stores over to another hive, where there was a queen, and it is therefore not impossible that the bees you mention did not carry honey back to their old locality, if you are positive the Italians, when they decamped, left none. The plan was, in fact, almost exactly the one I give in the A B C for making artificial swarms, only it was done rather early in the season.

BEES UNDER THE SNOW.

In reply to Charles B. Ellis, on page 592, you say that bees are better off covered with snow, etc. Now, I think you are mistaken, as my grandfather lost 100 swarms of bees, 40 years ago. They were standing in a bee-house, four feet from the ground. There was a board one foot wide that was hung on hinges in front of them. He neglected to shut it down that night, and the snow drifted in and closed the entrance of the hives and smothered them.

W. W. Bliss.

Los Angeles, Los Angeles Co., Cal., Jan. 10, 1881.

I must think you are mistaken, friend B., about the snow killing the bees. Thousands of colonies are now covered entirely with snow, and I never heard of its doing any harm, unless the snow became so wet as to settle down so the water from it ran into the hives, or closed the only openings. In all modern hives, there is abundant ventilation up through the chaff coverings, even though the entrance be closed hermetically. It is possible the hives you mention were made so tight, and waxed above, that the snow smothered them; but I can hardly see how it could be. Prof. Cook once poured water all over a hive, and let it freeze on; but it did not harm the bees. Under a snowbank is almost as good as buried in the ground.

THE BEES AND GRAPES; AND HOW TO SAVE EXPENSE OF GOING TO LAW, ETC.

I to-day have been reading about the troubles between friends Krock and Klasen, which I very much regret. No doubt friend Krock has been very much annoyed, and perhaps damaged, by friend Klasen's bees, and also by his don't-care and saucy manner; but I fear that friend Krock put it rather "thin" where he admits the "accidental" poisoning. I hope he will not set any more Paris green and mashed peaches and grapes where bees will find them. I am sorry friend Klasen went into the vineyard with that pistol, and hope he will throw it away. I am opposed to going to law if it can be avoided, and it can usually be done if men will only wait to cool off and reflect. I never advise men to go to law, but advise them to each select a man, and these two men select the third man, and they shall hear both sides of the matter in dispute, and shall render a verdict accordingly, which shall be final,—first having the parties enter into a *written agreement* to abide by such decision; and I think that would be the better plan in this case.

I fear I shall lose all my bees. Nov. 18th the thermometer ran suddenly down to 20° below zero, and caught them scattered all through the hives, freezing thousands of them, and it still continues cold. This morning the thermometer went down to 17° below. **H. H. Fox.**

Tribulation, McDonald Co., Mo., Jan. 10, 1881.

BEES AND GRAPES.

I have the very best opportunity for making observations in regard to bees eating grapes. I am located in the immediate vicinity of quite a number of vineyards; have kept bees a good many years. I had, during the grape season of last year, something over 200 swarms. I have two small vineyards adjoining my apiaries (about 1 acre each.) I raised a fine crop of grapes last year, a part remaining on the vines until frost. The most experienced grape-growers in this vicinity, whose opinions upon this subject are highly credible, are settled in their convictions that bees eat only such grapes as have had their skins punctured or broken.

There is one other thing, also, about which there is no disagreement: they are oftentimes quite annoying about the packing-house and in the vineyard, for they are ready in an instant to appropriate every grape that becomes broken, no matter how small the break or puncture. I consider this question of no little importance to both bee-keepers and grape-growers, as some very grave charges have been made in this matter against the bees.

H. R. Boardman.

East Townsend, O., Jan. 17, 1881.

BEES AND GRAPES.

I have had, for the past year, 75 colonies near and among a quarter of an acre of old bearing vines; and, although last year, and especially the fall, was a poor season for honey-gathering, I considered the grapes damaged very little by them. One of my men says they never break open a grape, but only suck the juice where they are already open; but he has observed the yellow-jackets, and thinks they do open the grapes. Now, if they are so destructive, why did not so many bees destroy mine? I think, as you say, a little Christian charity for each other would have got along with the matter without difficulty. **A. D. Benham.**

Olivet, Eaton Co., Mich., Jan. 18, 1881.

FINDING A DEAD QUEEN BEFORE THE ENTRANCE.

I am a new hand at bee-keeping; i. e., in frame hives. My bees are all packed in frame hives in the cellar, except four, which are in chaff hives, and I find that one of them is queenless. I chanced to see her as I cleared the dead bees out to day. Now, will you be so kind as to tell me what to do? Can I get a queen in time to save them, or shall I have to give them brood from some of my others, when it is time? A. W. MERRILL.

Parkman Cor., Piscataquis Co., Me , Jan. 14, 1881.

I do not think you need to be alarmed, friend M., for in all probability this was only an extra old queen, unless you should find the colony very much reduced. In the latter case, unite them with some other weak colony. If they are really queenless, it will do no harm at present. They are just about as well off, to start no brood until they begin to fly. When such a time comes, give them a little brood from another colony, and if they rear a queen that does not get fertilized, kill her and let them raise another. The second one will probably become fertile. It will help matters, if they are not very strong, by purchasing a queen for them of our Southern friends; but we have as yet never been able to get any before some time in April. Who among you will be first to report having new-laying queens ready to send out? Such a one shall have a free advertisement.

MORE NEW BEES.

My report for 1880: 17 stocks, with an average of 50 lbs. to the stock.

The bees are having a long cold pull of it this winter, and unless they can have a cleansing flight before long, there will be lots of bee mourners next spring. Although it may be hard on the bees, this snow is splendid for wheat and rye.

I have made arrangements to have some bees sent from Tahiti, an island in the South Sea, and would like to have your opinion, and directions for shipping bees that distance. The time from Tahiti to San Francisco is three mouths; but I think that, with candy and bottle, we can get them through. I should like to have the name of some responsible bee-keeper who could receive them at San Francisco, give them a fly, recruit them up, and mail them to me.

I will also try to find out about those "bobtail bees" of Brazil, if such there are. W. BUGER.

Conklin, Broome Co., N. Y , Jan. 19, 1881.

I have given all the directions I am able, on page 581, Dec. No. By all means, let us find out all we can about all the bees on this little world of ours. I would suggest the name of Andrew White, 313 Vallejo street, San Francisco, Cal., as a proper person to take charge of the bees on their arrival.

WHAT TO DO WITH BEES THAT HAVE THE DYSENTERY.

My bees had the dysentery the worst I ever saw. I went into winter-quarters with 13 colonies, and before January I had lost 6, and 7 had died on account of the cold weather and dysentery, so I had to practice something to keep up my 6 colonies. I put them in the cellar, took out their stores, and gave them a frame of candy, and the same time I fed them syrup in which I put a few drops of mint. Both were made of granulated sugar. I also gave them all the ventilation I could to get out the foul air. In about a week they were all well, and their excrements are now dry, and the bees are all well up to date.

I wrote this, that others might save their bees. I hope this will prove a good testimonial in regard to the soundness of your advice in January No. of GLEANINGS. WM. K. DEISHER.

Kutztown, Berks Co., Pa., Jan. 24, 1881.

FIRE AND BRIMSTONE.

My heart bounds when you touch a sympathetic chord in defense of the bees. I always had a terrible dread, when a boy, of a lake of fire and brimstone, which we then heard so much about; and, although we do not hear so much of it nowadays because it is getting unpopular, yet the dread still sticks to me. I hate even the scent of a match in a room now. I never got out with the bees when they were mad, and trying to have their way, so that I felt like sticking a match under their nose. I saved the lives of nine swarms a year ago last fall, which one of my neighbors was going to kill. I took honey to winter them on, which I had saved for family use; this last fall I took 20; 7 I bought; the rest were given me; they were all light in store; and with shame I will confess I have let two of them starve. It was very late, and frozen up hard when I got them, and I overlooked two, and did not give them honey. I have plenty of sealed stores for them. This is my feed for bees—they like it; they made it, and I like to let them eat it. I hear of many in this vicinity losing their bees by dysentery. Mine are in tolerably good order yet—no signs of dysentery, only in one case. The complaint is about as general in cellars as in chaff hives out doors.

D. HOUGHTALING.

Dimondale, Eaton Co., Mich., Jan. 19, 1881.

As the fear you mention seems to have worked wholesome results, friend H., I do not see but that the best thing you can do is to go on; for it certainly will be a fine thing for the bees that are doomed to such a death.

WHY FRIEND HYATT DON'T LIKE ITALIANS.

I purchased two nuclei of you last spring, one for myself and one for my neighbor. My neighbor's filled the hive, but not one pound of surplus. He divided them, and in a short time one stock robbed the other. There are a few in the old stock alive yet.

Now for my own: They filled the hive, and threw off a good swarm, and that swarm gave me another; that made me 3 stocks. In the fall I returned that swarm to the original one that they issued from, but I think I did wrong, for they would have wintered alone. I think that for supply men, the Italians are the bees, but not for me; unless I want my farm all covered over, I want no more of them.

My first Italians, two of them, swarmed the 15th day of June. They filled their hive, but not a pound of surplus. The same day a native swarm came out. They filled their hive, and six 3½-lb. boxes, both in the same kind of hive. Neither of the Italian stocks made an ounce of surplus. I put two boxes on the nucleus that was half full of honey and comb, but they would not touch them; at the same time, the hive was full of honey. The natives are ahead for me. G. HYATT.

Three Mile Bay, Jefferson Co., N. Y., Jan. 18, 1881.

I think all the trouble is, friend H., that you have not yet got used to the Italians. More than one has decided just as you do at first; but they all take it back after a more thorough acquaintance with the Italians.

Ladies' Department.

I THANK you for the lessons of faith and charity you give us; and may God bless you, and fill you with his Spirit. The Nov. No. just answered some questions in part that I wished to know about. Would friend Jones please explain his way of feeding bees on sugar—whether in candy or syrup, in winter, out of doors, or in cellar, as he says, in Nov. No., he wintered 160 swarms on sugar? The care of bees is to me a pleasant recreation, although it is a science of small and nice cares, and it has much to learn.

This spring I had 14 swarms—8 in the new Langstroth hive, 5 of which gave me over 200 sections of honey, and one old-fashioned L. hive, which gave 40 lbs. box honey. From one hive I took two frames of honey and brood—one to each of two others that I was feeding in the spring, and it gave me a small swarm the 8th of June. Then I put the new swarm in place of the old one, so it should not swarm again. It never seemed to do well, and I think the queen was lost when on her wedding tour; finally the other bees robbed and destroyed the swarm.

The yield of honey from apple-bloom was extra good this spring. No rain fell till out of bloom. White clover was abundant, but fresh showers during the day hindered the bees from collecting. It seemed to me that there was not as much honey as usual in the bloom. I had only two first swarms, and one second swarm. The hives seemed so full of bees in May that I looked for swarms. My seven swarms in box hives are fit only for Blasted Hopes.

MARY A. MUNSON.

Independence, Cuyahoga Co., O., Dec. 8, 1880.

HOW FRIEND JONES FEEDS GRANULATED SUGAR

If I am correct, my friend Mr. Jones does all his feeding in warm weather, during the fall. He feeds the sugar in the form of a syrup, and feeds it by pouring it on the bottom-board of the hive. Of course, the hive has a permanent bottom, made tight by melted wax, if not already made so by the bees, and the front end is slightly elevated, while feeding is being done. The syrup is poured in just at night. The idea although it has many good features, has also its objections, such as holding rain-water after storms, etc. It is a plan that has been many years in use, but I believe has not, of late, had very much favor. If I am wrong, will friend Jones please correct?

Reports Encouraging.

5650 LBS. OF HONEY FROM 52 COLONIES OF COMMON BEES IN ONE POOR SEASON.

I HAVE sold, of comb honey in sections, 2153 lbs. that I have an account of. I also sold about 200 lbs. in brood frames. I have also sold between 9 and 10 barrels of extracted. Well, to make a long story short, I think it safe to say that I obtained 5650 lbs., which would be 107 lbs. for each old stock that I had in the spring, which was 52—making, at prices obtained, about $550.00. How is that for a poor season, and black bees at that—or, rather, what they call black bees around here; but I call them brown bees? Any how, they can't be beat for work by any thing I have ever seen yet. I put 92 colonies into winter-quarters, with plenty of honey for winter, and expect to extract about 2 barrels in the spring. **DENNIS GARDNER.**

Carson City, Montcalm Co., Mich., Jan. 8, 1881.

When the spring opened out I found myself with 20 colonies to begin the season with. Eight out of 20 were so weak in bees that it took the whole honey season to build them up to anything like a fair stock of bees. It will be seen that I reduced my number to 12; from the 12 I took 850 lbs. comb honey in 1-lb. sections, and increased to 45 strong swarms. My bees are wintering nicely so far this cold winter.

THOMAS CRILLY.

Grafton, Lorain Co., O., Jan. 17, 1881.

FROM 1 TO 4, AND 50 LBS. OF HONEY IN ONE SEASON.

I wintered one swarm last winter in a Langstroth hive, which gave two good swarms in May, and 50 lbs. of box honey; one of the May swarms gave a swarm in August, and it filled its hive by the 1st of October. **JOHN G. FOX.**

Middle River, Madison Co., Iowa, Jan. 7, 1881.

Notes and Queries.

NEW COVER, ETC.

IN regard to GLEANINGS' new dress, I will say that it is perfection—stylish and artistic, and I can't see how anybody can find fault with such a splendid cover. Give us, my apiarian friends, as much practical information through GLEANINGS as you did last year (with the honest teacher's help), and I should think all ought to be satisfied. Now, Mr. Root, give us an illustration each month of some apiary, and a cartoon, and I for one am willing to pay 50 cents more for GLEANINGS per year.

PRESTON J. KLINE.

Coopersburg, Lehigh Co., Pa., Dec. 7, 1880.

I sold all my honey at 18 and 20 cts. per lb. (box;) 2-lb. jars at 40 cts. (extracted). **CASPER CAPSER.**

St. Joseph, Minn., Dec. 25, 1880.

We are having a very cold winter. I have some fears for our bees. It has been below zero from 5 to 26 degrees. **D. A. PIKE.**

Smithsburg, Md., Jan. 4, 1881.

SWEET CORN FOR BEES AND "FOLKS."

How many bushels per acre will sweet corn produce? How many bushels of green corn will it take to make one of dried? **F. J. WARDELL.**

Uhrichsville, Tuscarawas Co., O, Jan. 5, 1881.

[Who will answer?]

I do not see why friend Johnson, of Danielsonville, Ct., can find any fault. I sent him, as a personal favor, one swarm of Italians and a wintering box for $6.00, and I warranted them to winter all safely. If they do not winter, I am to send him another swarm. **A. W. CHENEY.**

Kanawha Falls, West Va., Jan. 10, 1881.

[I think he did not mean to find any fault, friend C., and I presume he did not intend his letter for print. You certainly did a great deal more than I should want to, especially during such a winter as this.]

My 50 swarms of bees are in good condition to date. I think this winter will call for another cartoon for Blasted Hopes. L. D. Gale.

Stedman, Chaut. Co., N. Y., Jan. 17, 1881.

I began bee-keeping last spring by taking a hive on shares. I got about 30 lbs. of honey, and two swarms from it, which I thought was doing pretty well for last year. We shall probably get more bees in the spring. I use Mrs. Cotton's hive, and, so far as I know, it is a good one. Chas. O. Meloon.

Portsmouth, N. H., Jan. 8, 1881.

It has been cold here; 24° below zero has been touched. Box-hive bee-men are reporting heavy losses of bees. Mine in chaff hives are still able to raise a whiz-z-z. They haven't had a good fly for nearly two months. How do your Palestinites seem to stand severe weather? J. W. Carter.

Pleasant Dale, Hampshire Co , W. Va., Jan. 13, '81.

[Palestine bees are "O K" so far.]

REPORT IN BRIEF OF AN A B C SCHOLAR.

In 1878 I got 3 colonies in box hives, and lost them all by dwindling in March, 1879. I then began again and got my first colony, a swarm, June 28, 1879; got 25 lbs. comb honey in 1879, and 149 lbs. ditto in 1880, mostly 1-lb. sections: 81 lbs. extracted in 1880. How is that for an A B C scholar less than two years old? Milton Krum.

Hurleyville, Sull. Co., N. Y., Dec. 3, 1880.

SCOTLAND HEATHER-HONEY.

As far as I can learn from various districts in Scotland here, bees are all in excellent condition, in which I hope they will continue till spring. The last heather-honey harvest here was the best for upward of 50 years. The weather has been stormy for the past 10 days, but more settled and mild today. John D. Hutchison.

Glasgow, Scotland, Dec. 14, 1880.

I have been looking through my bees, and I find they are standing the winter very well. They have a sufficient amount of honey to last them until spring, and I also notice eggs and young brood in the combs. I am glad to tell you that I have been successful. I also profited by giving my attention to them during the leisure hours I have had from my farm. J. W. Traylor.

Mt. Joy, Delta Co., Texas, Jan. 14, 1881.

I should like to ask you a question if it isn't too much trouble; that is, will it do to turn bees on the honey or in the hive that our bees died in?

D. C. Stringe.

Clinton Falls, Putnam Co., Ind., Jan. 12, 1881.

[It will do no harm whatever to put your bees in the hive where other bees have died, after the weather gets warm.]

BITTER HONEY.

Bees last year increased from 14 swarms to 47; sold 13 tested queens, and took 400 lbs. of honey, and might have taken 400 more, but the honey was so bitter we could not sell it, so left it for the bees. We think it was made from a yellow weed that grows very plentifully in our streets. I intend to remove them into the country, 3 miles from Ft. Smith, and see if the quality of the honey will not be improved. Stacy Pettit.

Ft. Smith, Ark., Jan. 17, 1881.

HOME-MADE HORSE-POWERS.

Will H. L. B., who speaks of his Adams horse-power in Gleanings, page 37, please give your readers a description of his power, showing how the rim, or felloes, were made? of what kind of lumber? whether he had to strengthen it with iron rods for ties, etc., so that a person with or without the aid of a carpenter could make one the first time trying?

Lucius Snow.

Blakesburg, Wapello Co., Iowa, Jan. 12, 1881.

[Will H. L. B. please answer?]

Will you tell us in next Gleanings what are the peculiar properties of the little piece of steel or iron that comes with the magnet? It seems to have ways of its own. J. E. Dart.

Farmer City, Ill., Jan. 8, 1881.

[It is, or should be, simply a little piece of pure soft iron; it has no property different from any other iron, and is simply put on the magnet to unite the poles, and thus hold or keep the magnetism. I have been thinking of giving some of the experiments that may be performed with one of these little magnets, if we have a sufficient number among our readers who would be interested in the matter.]

ALFALFA AS A HONEY-PLANT.

Do you grow alfalfa clover on your honey farm? If you have not, doubtless some of your readers in Ohio have. Will it pay for bee pasture and feed for stock, or will Alsike pay better? I have about 15 acres to sow to clover next spring.

J. C. Phillips.

Westchester, Butler Co., O., Jan. 1, 1881.

[We have a small patch of alfalfa, and it does pretty well so far as forage is concerned, especially in the way of standing drought; but although it has been in blossom two seasons, I have never yet seen a bee on it to my recollection. It may be that it is because the plat is small; still, I can not think bees would find very much honey on it, or they would be there sometimes.]

BEES AND BASKETS; MORE ABOUT WILLOWS.

I here inclose a cutting taken from a small tree growing in my garden. It was in bloom last spring, and the bees seemed to be very busy on it. It was given to me by a Mr. Samuels, of Clinton, Ky., about 10 miles from here. Mr. S. is one of the proprietors of the Mississippi Valley nurseries. I also inclose their description of it, cut out of a catalogue:

> Viminalis—Basket Willow. Bee Willow. A rapid growing tree with catkinlike flowers in early spring. A good shade tree, and the flowers are valuable for bees. The twigs are excellent for making baskets.

It is of a very thrifty growth, and blooms young and early. Eli Reeves.

Cayce, Fulton Co., Ky., Jan. 15, 1881.

[Here is the point, friends. We will grow willows to make up baskets during the winter, and to furnish the first honey and pollen in the spring. Willow baskets are the most durable known, are they not? and there is always a good market for them, if made cheap enough. Who will tell us more about it?]

LIGHT IN THE DARKNESS.

One of our little girls got snake-bitten, and all together kept Mr. Mosher so much at home that he could not make a living for his family. Now, we are all well again, and he has not time to write, so I have to do his writing for him. He told me this morning that he expected we should have to do without GLEANINGS, for awhile, but I would rather live on half-rations for a month; and as I have a dollar of my own, I will send for it any how, and I intend to take in sewing and make money and send to you for an Italian queen and 1 lb. of bees in the spring. MRS. A. C. MOSHER.

San Marcos, Hays Co., Texas, Jan. 11, 1881.

Have those silk handkerchiefs, of which you speak, a picture of a bee on? WILLIAM FOLTS.

Great Valley, Cattaraugus Co., N. Y., Jan. 5, 1881.

[No; but I thank you for the hint. If we ever get such a one, you shall have it.]

CALIFORNIA WHITE SAGE.

Will the California white sage do for common use? I have a few plants growing, and it seems to me to have a better flavor than the common sage. CHAS. KINGSLEY.

Greeneville, Greene Co., Tenn.

[Who will answer friend K.? We had a plant in the greenhouse, but the "big freezes" was too much for it.]

SILVERHULL BUCKWHEAT.

I was advised to sow it on the 20th of June; but if it can be sown on the 10th, or earlier yet, it is better, because it will be in bloom if the basswood is blossomed out, and will not be as apt to freeze before it is ripe. Honey from the silverhull is much lighter than that of the black. The millers claim that the silverhull gives from 10 to 15 per cent more flour than the black. ERNST S. HILDEMAN.

Ashippun, Dodge Co., Wis., Jan. 18, 1881.

Bee Botany,
OR HONEY PLANTS TO BE NAMED.

A NEW HONEY-PLANT.

I WILL send you some of the weed that the bees are getting honey from. It commences to bloom the middle of Sept., and blooms till Dec. Frost don't hurt it. Nothing but a freeze will hurt it. This weed we call flaxweed. It resembles the common flax, but it brushes out more. You can sow the seed I send you. Sow as soon as you get them. It grows here all over the face of the earth. It is easily killed out by cultivation. R. DEVENPORT.

Richland Spring, Tex., Nov. 15, 1880.

Here is Prof. Beal's reply:—

I have spent an hour over it—all the time I can now spare. It is not described in my books; or if it is, I get on the wrong track some way. It is much like goldenrod of some species. With more time I know I could get it straight; but I do not feel as though I could afford to neglect my other work for this. Identifying plants is mostly drudgery. W. J. BEAL.

Agricultural College, Lansing, Mich.

I have published the above, that our friends may not trouble our kind friend by plants of little value as honey-plants. I have sent him a dollar for the time spent on this one, and will willingly do the same with all that promise to be important. Send as many to us as you please, for we have time and the necessary books, and can identify a great number of them ourselves.

BEES AND GRAPES.

THE PREMIUM ARTICLE.

ALTHOUGH not called upon in the matter of Mr. Klasen and Krock, my experience, in pretty much the same thing, might benefit both parties, and a good many others who might get into the same fix. Mr. B., a real good neighbor across the street, having a fine large garden and orchard, complained to me, off and on, during last summer, that my bees were injuring his peaches, grapes, etc. I tried to explain to him that a bee can not pierce the skin of fruit, and that bees are very useful in fertilizing the flowers of fruit-trees and even grapevines, as best I could; but finally he came to me and said, "Mr. Schneider, I am trying to make cider; but we had to quit on account of the bees annoying us; besides, I hired a man, and have to pay him. I can not stand it any longer; you will have to shut up your bee-hives, they are beginning to be almost a nuisance."

At this time I was very much tempted to give Mr. B. some such answer as Mr. Klasen did to Mr. Krock, when he told him to tickle the bees a little behind, whereby he could tell them apart; but, thank God, there was another voice in me that commanded, "Hold on, and be gentle now!" I therefore told Mr. B. that others have bees in the neighborhood, besides myself; but as my bees are nearest him, I would do any thing he thought proper for me to do, only I could not shut up my hives. I then proposed to furnish screens for doors and windows, but he said he had no vacant room to make his cider in. As he had quite a small cider-mill, I told him that if he would agree to make his cider after dark I would haul him over my large mill, furnish him a man, and help along myself until all the cider was made. This proved to be more than satisfactory, as Mr. B. accepted only of the cider-mill, but declined the help; and we are to-day, if any thing, better friends and neighbors than before the difficulty arose.

Now, by this I do not mean to show what Mr. Klasen and Mr. Krock should have done at the critical moment; but since both have made mistakes in the matter, they should have a meeting, not with lawyers and constables, nor with might and power, but with a determination on the part of each one of them to make a sacrifice, in order to regain peace and good will toward each other; pay the damages mutually, and listen to that voice that undoubtedly exists in both, and cries, "Hold on! be gentle now; go no further! bring it before disinterested friends, and let their decision be final." A. SCHNEIDER.

Louisville, Ky., Jan. 20, 1881.

Well done, friend S.! That is what I call carrying religion into business, and that kind of a spirit would get along almost anywhere. If you will accept it, I will credit you with $5.00 for the above article, and thank God for having put it into your head to send it, besides. Why! such a monitor within your heart to warn you, when anger is pending, is worth more than (can't I be extravagant just this time, dear friends? I feel just like saying) ten hundred thousand million dollars in the bank. Your letter makes me feel that the "song the angels sang" has come to pass—"peace on earth, good will toward men."

Our Homes.

Now I beseech you, brethren, by the name of our Lord Jesus Christ, that ye all speak the same thing, and that there be no division among you; but that ye be perfectly joined together in the same mind and in the same judgment.—I. Cor. 1:10.

THE Sabbath-school mentioned last month is growing and prospering finely. I found over a dozen little girls and boys waiting for me when I came at the appointed hour the Sabbath following; and, what was better still, a great many of the parents were there with them. If you want a Sabbath-school to be a success, you want old and young too. We first sang,—

"I am so glad that our Father in heaven,"

from the Gospel Hymns, and then I told them we would open the school with a petition to God to bless our work, and to show us what he wished us to do, and why he had called us together. Did not God call us here, my friends? If not, who did? I told them how it was that a thought came into my mind to come over there, when I was out in the country in another direction, and that when I turned about and came, I found some friends gathered together, who asked me to come over and start a school in their midst. Some of these friends were there before us. If it was not God, or the Spirit of Christ, that put it into their minds and my mind, what was it?

After the opening prayer, we read the lesson together, and then the school was divided into classes. As between 30 and 40 were present, we had five very fair classes,—three of the children, and two Bible-classes. As there was no schoolhouse near, we had to use a private house; but by dividing off into different rooms, and bringing boards to put across the chairs, we had things arranged very pleasantly. After a half-hour's talk between the pupils and their teachers, we all gathered again into the largest room, and each child came up before the table where I sat, and repeated a text. Some of them gave several verses of their own selection. The very smallest ones repeated little texts that their mothers had taught them. After a few Sabbaths, more of the parents came in. Quite a number of these people seldom went to church, and a few of the men there, I knew, were in the habit of taking God's name in vain, or at least had been in former years. These little texts, coming from such childish voices, were a power, as any one who has heard them, can testify. One wee little chick came up bashfully, toward the last; but when she turned around and saw so many eyes upon her, she could not remember a single word. In pity for her, I asked if no friend of hers could not start it for her. After a little pause, a man stepped up to the door from one of the back rooms, whom I had failed in getting to come in with the rest, and he suggested to her the first words of her verse. But she was so much frightened now, that she could not even say them after him, and so he gave the beautiful text, one word at a time, himself. It was the first time I had ever heard him use such words as those, with any such gentle accents, and I wondered at the time if it were not possible that even that little child, standing there before us in mute silence, might not be the means of leading that great strong man even into the kingdom of heaven. I selected the very prettiest card for her, and told her that God was just as well pleased to have her come up on the floor and try, as if she had repeated the longest verse of any one, and she sat down feeling happy, after all.

I learned the names of all of my juvenile class the first Sabbath, and before closing I suggested that we should have Frankie, who is about 11 years old, act as treasurer; and so we passed around the hat, and obtained, if I am correct, 26 cents. Oscar, of about his own age, was appointed secretary, and was desired to write a letter for some lesson papers. I submitted to the school a library of ten books, which they were to read through and report on the next Sabbath, and then purchase if it was the wish of the school. All were approved, and the treasurer paid me 45c for them, for which I gave him a written receipt. One of the ladies present volunteered to hold a singing-school for them every Wednesday night, where they might practice and learn hymns for the Sabbath. As the pieces would then be already selected, I would have but little to do. I would urge, in all mission schools, or in schools of any kind, having the labor and responsibilities divided around as much as possible, and, as far as may be, letting it rest on young shoulders. Boys and girls almost always want something to do, and some light office of this kind will many times hold them and make them love to attend, where they would not otherwise. I am by no means the only one who is in danger of getting dull and sleepy if I can't be "doing something."

Do you not see, my friends, how Sabbath-school work tends to make us all of "the same mind," as in our opening text, and to dispel discord and contention?

Well, I mentioned, last month, stopping to see my friend in jail, to tell him why I should be later than usual in making my visit that night. After I got back, I told him all about the work, and he in turn told me more than he ever had before about his past life. There are some such good lessons in it, that I think he will pardon me if I give a part of it here.

D. is a bright-looking young man of about 30. I think he tells the truth when he says he always found plenty of work, always wore good clothes, and always had at least some money in his pockets. It was not much over two years ago that he was employed in a neighboring town, and had fair wages. His employer was in the habit of sometimes taking along a jug of cider when they started out to work. This is nothing very unusual in our community, or at least it was not a few year ago. I am not sure but that we have farmers who do the same thing now. His employer was a young man, and a farmer's boy, and probably had been brought up to so doing. This particular day, they took the jug of cider along with them after their work was done, and with it between them, played cards, pretty well along into the night. In one sense, this was nothing so very terrible either, because it is not so *very* uncommon.

A few years ago, I went one Sunday afternoon to see a bee friend. Of course, this was before the era of Sunday-schools and such like dawned upon my life. Not finding my friend among the bee-hives, I wandered through the orchard, and, hearing voices, went over the hill, and found four or five men and boys sitting on the green grass, playing cards, with a jug in the midst of them, containing, I suppose, cider. "Well, what of it?" Why, nothing particular, and yet the scene has often recurred to my memory. At that time I was pretty well known as a skeptic, but still it was also known, I believe, that I did not drink cider nor play cards, and the group seemed to rather stop their merriment as I came up. Pretty soon they broke up and went away. It may be hard to put your finger on any precise sin, right there; but still, my friends, without any regard to what you believe, would you not a little rather your boy should not be found in such company? It would be a little rough to call these men and boys either intemperate, Sabbath-breakers, or gamblers; but, my friends, was it not just a little start toward the stone jail in which D. and I were sitting that Sabbath night? Reader, do *you* know what it is to feel,—

> Where is my wandering boy to-night—
> The boy of my tenderest care,
> The boy that was once my joy and light,
> The child of my love and prayer?

Let us go back to D.'s story. After they had played until the employer went home, D. drank still more deeply from the jug. In a stable near by was a horse that D. sometimes borrowed. Near by was a wagon, belonging to another acquaintance. D., under the influence of the cider, put the horse into the wagon, without saying a word to anybody; took a load of stuff from the shop, belonging to his employer, and, not forgetting the inevitable jug, started off in the night. About daylight he drove into a town sufficiently far away to be safe, and bargained for the stuff at a fair price. The purchaser not having the money in his pocket, went out for it, but was cautioned against buying the goods. He went back and spoke to D. about telegraphing to where he came from, to see if it was all right. D. assented; but, anticipating trouble, walked to the nearest station, took the first train, and left horse, buggy, and all. Before going out of the State, however, he stopped, got work again, but soon afterward, in another drunken spree, got into trouble again, which sent him to the penitentiary. Before going, however, a kind lady visited him in jail, and told him of a Savior's love and a new life. D. promised her to go to prison and behave himself, and when he got out he would try to be a man and a Christian. He kept this promise, and one who knew of the facts told me that when he bade the boys good-by as he left at the expiration of his sentence, he said, "Boys, I am going out, but never to come back here again. And the reason I shall never come back here is because I am going to behave myself and become a good man."

Alas for good resolutions! D. had not yet stepped out into the open air, a free man, before a warrant was served on him for horse-stealing, and he was taken up and lodged in our county jail, where I first found him.

Now, my friends, the whole point of my discourse comes in right here. D. was despondent and discouraged. He was in the attitude of nearly all I meet in our jail, and not very far from the attitude of some out of jail. He insisted that the world is unkind, uncharitable, and corrupt; that the prevailing tendency of mankind is to "kick a man when he is down," to use a common expression, and that when really he makes an effort to reform and lead a new life, he is met straightway by some underhand clip or set-back, that makes it a wonder anybody ever succeeds in stemming the current of evil that is met everywhere. My friends, have you ever talked or thought that way? Oh that I could persuade you to believe me when I tell you it is the promptings of Satan himself that gets you into these moods, and that makes you judge so harshly of the world, of which *you* are a member! In doing this, you are placing yourself with the great army of criminals and guilty men, who *invariably* talk thus. When I have a class of saloon-keepers in jail, as I have now at this moment, their talk about hypocrites, and denunciations of church-members, and even ministers, is such that I have to insist on their stopping, or I could not get in a word. What does this indicate? Are *these* men better than those they so bitterly stigmatize? Well, now, for a contrast, just go and talk with some one who is a real, honest, earnest Christian worker. I have often spoken of a young friend who is fitting himself in college for mission work in Africa. I have spoken of his successful work with our boys in jail. Do you think he spends time in talking about the hypocrites he finds in the world? He has just passed the holidays with us, and I have had long talks with him, but I never heard him utter a word against humanity. I never heard him speak of ever having known a hypocrite. But, my friends, I have heard him, with bowed head, speak of his own sins, and beg of me that I would join with him in praying that God might keep him from any temptation that would mar his usefulness to his fellow-men. His whole life seems wrapped up in the work of leading men to repent, but no word of censure or reproach ever passes his lips. He reproves and rebukes sin, but the one reproved is ever his friend afterward. Some there be, it is true, who at first laughed at his meek, inoffensive ways; but when he left, I am sure that from almost every heart went up a "God bless Mr. House!"

Well, when I first met D., he was settling down, as it seemed to me, in a hard, bitter, stony spirit, toward everybody. It was not so much what he said, as a hard, bitter curl of the lip, when he said, "Oh! *I* know; you need not talk to me; I know all about it, and that is just the way it goes *always*. If they will let me try, I will show them I can be just as good a man as any of them; but if they think to make me better by sending me back to prison, I do not know whether I shall ever try again or not."

I could lift him up a little while; but before my next visit he would get away back again, and so I asked M. to go in, and others of the young men who belonged to our young people's meeting. Their bright young faces, and their trust in God, had its effect, and D. was rising up to where he could begin to hold on to the Savior, who died for just such as he.

Well, on the evening I have mentioned, D. gave me a fuller history of his troubles than he had done before, and I was encouraged to see him take the blame himself as he had never done before, instead of laying it on others. After he had finished, I spoke in a kindly way, and said, "Why, is it possible that you, D., *really you*, took your employer's property in the way you have mentioned, and tried to sell it?"

"It is true, Mr. Root; and to come right down to the facts, I do not *deserve* the companionship or recognition of a single good man or woman;" and he bowed his head in real thorough conviction of the great sinner he had been against God and his fellow-men. I do not mean these were his precise words, but it was the substance of them as nearly as I can recall it. A little later, he on bended knees asked God to be merciful unto him a sinner. D. had passed from death unto life, and it only remained for him to show God and the world that he could live what he had professed. Not only did angels minister unto him spiritual comfort, but kind friends began to be visible to him all around; and as the new life unfolded, he saw the world was full of people who "bear long, and are kind." D., instead of considering the world as his natural enemy, was beginning, as in our text, to have confidence in it, and to be in the "same mind and in the same judgment." Will any thing else but the Bible bring a man out and up in the way I have described? I prayed with and for D., and then I wrote a letter to the man who owned the horse, and another to his old employer, and God heard and answered our prayers, and D. was given only 40 days in our jail, and then he is coming to work for me. Do you wonder I went home that night praising God for having turned me around in the road, and shown me what he would have me do? At such times, it seems to me that I can get at least a glimpse of the promise found in the chapter following the one containing our opening text,—

> Eye hath not seen, nor ear heard, neither have entered into the heart of man, the things which God hath prepared for them that love him.—1. COR. 2:9.

M. went and visited him, and finally Mr. House followed up our efforts until D., instead of saying he would not go back to Columbus any more, on his knees asked God to keep him in jail until he saw it was best for him to come out, and he would say, "Thy will be done."

Now, my friends, it is not the boys in the jail alone who need our opening text, but sometimes it is church-members, and those who call themselves Christian people. Some friends came in just when I was writing, and I asked them about the Sabbath-school in their neighborhood. They said it was given up, and the preaching too, because the people could not agree. These were Christian people too, but of several different denominations. Away down in Missouri I heard of a similar case, where the Sabbath-school was dropped, and it could not be kept up, because some belonged to one church and some to another. There were people enough to make a good congregation, but they could not forget their differences even long enough to listen to one sermon a week, and so they —well, I am not sure I know just what they did do. Dear reader, is there any such state of affairs in you vicinity? and are you sure it is not to you that God is directing me to read this little verse to day?

> Now—I—beseech—you,—brethren,—by—the—name—of—our—Lord—Jesus—Christ,—that—ye—all—speak—the—same—thing,—and—that—there—be—no—division—among—you;—but—that—ye—be—perfectly—joined—together—in—the—same—mind—and—in—the—same—judgment.—1. COR. 1:10.

Most of you know our neighbor Mr. W. H. Shane, whose reports have been given for several years past in our journal. A few weeks ago a little girl in our Sabbath-school asked her teacher if they might have children's prayer-meeting in the afternoon. She came to me with the request, and I gave notice that one would be held that afternoon. Quite a number of children were present, and many of them signified, that first day, that they would like to be little Christians. The meeting was kept up, and a few Sabbaths after, a wee little girl belonging to friend S. came to the meeting. Small as she was, she seemed to realize the full import and the solemnity of the occasion; and when opportunity was offered, she arose for the prayers of her little mates. On going home, she told her mamma what a real good meeting they had. A week later, and the little one was prostrated with a severe earache, which failed to succumb to the usual remedies. I called to see her, when it was feared she could not get well, and she lay like a fair flower in her little crib, insensible, for it had gone to her brain. "Has she spoken of dying?" asked I.

"Only once," said her father, "and then she asked her mother if little girls ever died with the earache."

A few days later, and I heard she was gone. I called again, to say what words of comfort I could to the poor father. "Did she speak before she died?" said I.

"Yes," said he, and his countenance brightened. "Shortly before she died, there came a change; and as we gathered around her, she opened her eyes so intelligently, and looked from one to the other. The pain seemed gone, and we waited to hear what she was going to say. Her lips moved, and as we listened in breathless silence, she spoke clearly and distinctly,—

'Now I lay me down to sleep,
I pray the Lord my soul to keep;
If I should die before I wake,
I pray the Lord my soul to take. Amen.'

"The last word came clear and plain, and that was all."

As I told of this in our Sabbath-school, and afterward to that school over among the hills, which now numbers toward forty, strong men and women were moved to tears.

It was the little prayer her mother had taught her to say before she lay down at night. Has any one the hardihood to say that God, the creator of the universe, did not hear this simple little petition from the dying breath of the work of his hands? Can we not, my friends, so live that our dying beds may be like that?

Except ye become as little children, ye can not enter the kingdom of heaven.

FROM THE WORKERS BEYOND THE SEAS.

As the following treats of bees as well as mission work, I presume it will be read with interest by all our readers. It is an extract from a letter sent to one of our bee-men from his brother, who is a missionary. Sending our journal free to missionaries may not be so bad an idea, after all; but I confess it did not occur to me how much help they might give us in the way of looking up the different races of bees that are to be found on our globe. As we catch glimpses of their work from these extracts from their letters, we feel better acquainted with them, and more like praying for them intelligently.

I was invited into the house of a tea farmer, a Cantonese. I noticed that there were several bees around, and just then he asked me to change my seat. I had been sitting with my back against the table, and as I changed he pointed to a drawer in the table, which seemed to be full of bees. He drew it out an inch or so, and, sure enough, there was a swarm of bees. He informed me that they settled there last year. They seemed very good natured. One alighted on his neck, and his little boy began to call out; but he quietly waited a moment, and off it flew. As I came past the other houses on my way back, I was invited in, and found a man trying to read a book I had given him. I sat down and expounded it. He asked, "What is God?" and I tried to explain to him. Then he asked if I had any more curious things. After awhile I took out a pocket-compass, and a knife with a magnetized blade. They knew what the compass was, but did not know the principle on which it works, nor any thing about magnetism. Of course, they "ai-ya-d," and wondered, and admired. They passed around some rice turnovers. These are made of a glutinous rice, boiled, and then pounded into a hard dough. The inside is filled with a conglomerate of bean sprouts, greens, red pepper, garlic, salt fish, pork, and I don't know what else. They were piping hot. The first few mouthfuls tasted rather strong; but the taste improved as I ate, and I disposed of two and a half, without trouble.

There was one man on the boat said to me one evening, that he would like to go with me to foreign lands; would do any sort of work for me if I would take him. I began to moralize on going to heaven as infinitely better. He said up in heaven we could see all lands at once. He asked how long one would have to practice Christianity before he could ascend to heaven. I replied, it was after death. He answered rather sadly, "When I die, I won't be." The Buddhists and the Taoists both believe in the possibility of translation, if one can only become perfectly abstracted, and stay so long enough.

Foochoo, China, March 1, 1880.

WHAT TO DO WITH THE BOYS.

As you are a Sunday-school man, Mrs. L. wishes me to ask you how to entertain and instruct a class of —well, I'll call them "street Arabs," for most of them never attend church, and none of them attended Sunday-school until she called on and persuaded them to attend. The class now numbers 21 pupils, from four to eleven years of age; and how to entertain them sorely perplexes her. W. W. L.

Otwell, Pike Co., Ind., Dec. 9, 1880.

Your wife has struck on one of the hard problems, friend L. I told you last month, that the question of what to do with criminals is one that is now puzzling our greatest minds. Well, it is not unlikely that your wife has to do with criminals in their earlier stages, and therefore I would bid her God-speed, and tell her not to be discouraged, even though her work seems the most hopeless. Any thing is better than giving them up and letting them go. If she has got 21 that care to come and listen to her, she has already proved her ability. I need hardly tell her that the first thing is the Bible for a daily teacher, and much earnest prayer to God for help. She seems to know what a power there is in visiting them through the week, because, if I am correct, it is in that way she has brought them in. If they will look at books and papers, these are excellent mediums for catching and holding their attention. If they won't, interest them with curiosities; show them simple tricks and experiments; post yourself on the leading events of the day,—the news for instance; study the especial forte, or hobby, of each member of the class; learn their names, so you can call each one by his especial familiar title; set them to work, and, through it all, strive to show them of the spirit and love of the Master, who is calling to them through their better selves. Teach them how to be brave and magnanimous; teach them the true elements of gentility and refinement; get acquainted with their parents, brothers, and sisters, and call on all you help. Get everybody to help that you can lay hold of; get the boys themselves to labor for the salvation of each other; and every time you get discouraged, and feel like giving up, go to that Master and beg and plead for them. Hold on and importune, and when you see one soul safely into the kingdom, it will give you a joy that will brighten your whole life thereafter. Our friend M. has a class of little girls in that school over among the hills, and the light and hope that beams from his face as we go home after the school is over is—I can't tell it, but the Master can. Hear him:—

I thank thee, O Father, Lord of heaven and earth, because thou hast hid these things from the wise and prudent, and hast revealed them unto babes.—MATT. 11: 25.

WHAT SHALL WE DO WITH THE MIDNIGHT ASSASSIN.

I must confess I was somewhat taken aback when you said, "Perhaps it would be best to shoot the man that had his hand in our trousers pocket." I really did not expect such advice from a teacher. When I am at work at the mill, and come home, I find the boys have brought in all the axes and bolted all the doors. Their ma asked them why they did not do it when pa was at home. They said, "Nobody can hurt us when pa is here."

Can we not put that trust in our heavenly Father that our children put in us? None need fear when the Lord is near. When the war was over, and I was coming home on the steamer, it was so crowded I was compelled to take deck for my place of rest. Just as I had got to sleep, I was awakened by a man trying to get his hand into my pocket, and one hand on my collar. What was I to do but say, "Lord, save or I perish"? and the thought struck me, I would give up my money and save my life; so I thrust my hand in my pocket as quickly and as best I could, to give up the coveted treasure. It would have done you good to have seen him run. I guess he thought "perhaps" I would shoot.

Spring Station, Ind. GEO. W. STITES.

Very good, friend S., and I am very glad indeed to have this side of this subject brought out. I would suggest, that some might say that it was the fear of the pistol after all that saved your money, and perhaps your life; but as you had no thought of a pistol, and was only trusting God, it seems to me your prayer was plainly answered. I know what some of you will say; but, my friends, let us have a broad charity for each other on matters of this kind, for our opinions and our methods of acting would, I know, differ very widely on such matters. I presume it would be well to ask you to keep cool while reading the following, and to look out you are not swayed by these natural feelings that well up so naturally while you form in your own mind an opinion as to what you would have done under the same circumstances. Bear in mind, we are coolly and deliberately discussing the subject of crime, with a view of deciding how best to treat it, just as we would do in regard to the yellow fever.

Since reading your Dec. No., there was a little occurrence that gave additional interest to your question, "What is the proper thing to do in case you find a man with his hand in your pocket?" (A lady suggests that the proper thing is to "screech.") I will briefly state what I wish to bring to your notice. We have some fine turkeys, and, hearing a disturbance among them about 11 o'clock at night, I jumped out of bed, putting my head out of the window. I soon saw the cause, and called out to the persons to leave. They commenced to call their dogs, pretending that they were hunting; but I could see no dogs. They passed on to our next neighbor's, and went through their outbuildings, leaving open doors and gates, and in an hour and a half returned. I got up, but could not see them. I laid down again; then I heard the turkeys shriek, "quit! quit!" and, on looking out, saw one man running along the fence, under the cover of the shadow of it. I called out to him to "move on," three times; but he stopped with three or four companions under the tree where the turkeys were roosting, and seemed determined to have one. I told my brother to fire his revolver to see what effect it would have. As soon as he fired they called us names, and threw clods and stones at the house. We then told them to move on or we would fire closer the next time, and they, not doing so, my brother fired again in their direction; then they left our place, and gathered up chickens and turkeys from the neighbors. Did I do the proper thing? In all, there were five or six of them. We saw five. I would like to have your opinion. I believe it is right for a man to protect his property, always in a legal way when it is practicable; in an emergency, the best way he can, according to his judgment. In support of this view, I give one section of Bishop Hopkins on the ten commandments. Comment on the sixth commandment: "Yea, we find, Exod. 22:2, that God allows the killing of a thief if he breaks into a man's house by night, but not so if he attempts it by day. And possibly the reason of this law might be, because, when any cometh upon another in the night, it might be presumed that he takes the advantage of the darkness, not only to steal his goods, but to harm his person; and therefore God allows it as lawful to kill such a one as a part of necessary defense; from which I think we may safely conclude, that it is lawful also to kill those who attempt upon our goods, when we have reason to fear they may likewise design upon our person." In the light of the foregoing, I think I was justified in my course. God permits men to own property, and also to protect it. We should form our conclusions, not from a single passage of God's word, but from the general tenor of the whole, as it is its own best interpreter.

JOHN BAIRD.

Elm Grove, Ohio Co., W. Va., Jan. 6, 1881.

Now, friends, did friend B. err in letting them off so easily that they might go and steal his neighbor's fowls, and go on in such work unpunished? or was he wrong in using a pistol at all, and in having one about the house? What are you going to do when you find yourself in just such a predicament?

BY a recent arrangement, the manufactures of our planers have enabled us to offer the Gem planer at the same prices as we have been selling the Lilliputian. The Gem is a much better machine, for, besides being heavier, the bed raises and lowers for stuff of different thicknesses, instead of having the cutters movable, as is the case with the Lilliputian. Where plaining is to be done, one of these machines will pay for itself in a very little time.

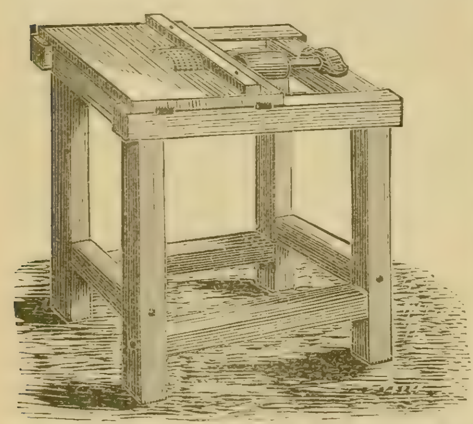
THE SETH THOMAS CALENDAR CLOCKS.

ABOUT 25 have applied for one of these, and the order is already at the factory. In answer to many questions, I would say, the clock is 8-day, spring strike. The height is 20 inches, and the diameter of the dials, eight inches. The case is beautifully finished in mahogany and rosewood, with a sort of octagonal top. The works are heavy steel and brass. The calendar tells, in large plain figures and words, the day of the week, the day of the month, the month of the year, and makes all the changes for the different numbers of days in each month, even to giving February 29 days one year in four, without a single motion or bit of prompting on your part, only to wind the clock once a week. If the clock runs down by carelessness, you can set the hands of the calendar just as easily as you set the hands of a common clock. This latter feature is a late invention. Every clock is guaranteed by the Seth Thomas factory, and their name attached to any clock is about the highest praise you can give it. Send on the $7.50, and you can have your clock by return express. If ordered with other goods, they can go safely by freight, as each one is securely boxed by itself. They will be shipped from here.

MACHINERY FOR MAKING ONE-PIECE SECTIONS, AND HOW TO USE IT.

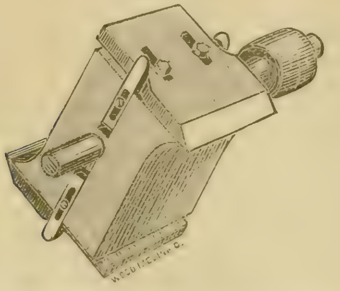
THE WAY WE WORK AT OUR SHOP.

IT takes three different machines to make these sections to advantage, besides the usual planers and cut-off and ripping saws. I have explained to you in the A B C, and in GLEANINGS about a year ago, how the bolts of pieces of plank were to be cut off and dovetailed across the ends. We here give you a picture of the gang of eight saws, mounted on a table, ready for use.



MACHINE FOR CUTTING THE GROOVES, OR DOVETAILING, IN THE ENDS OF THE PLANK.

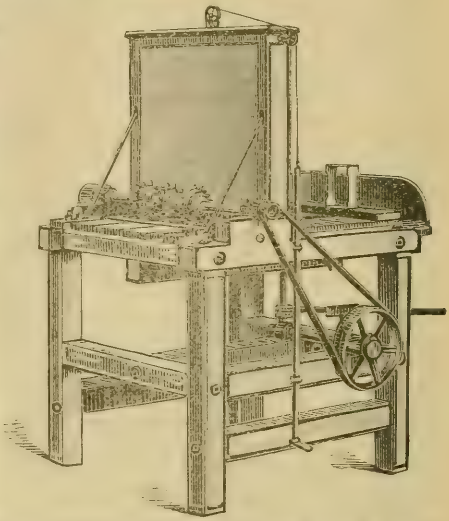
Our friends often complain of the expense of this machine; but unless it is made very strong, with a heavy mandrel, and wide pulley for the belt, much trouble will be experienced in having the mandrel heat, the saws smoke, etc. The whole expense of the machine, nicely fitted ready for use, will be $30.00.



CUTTER-HEAD FOR MAKING THE ENTRANCE FOR THE BEES.

After the bolts are grooved with the above machine, the passage for the bees is cut in each piece. This can only be done nicely and rapidly with a cutter-head, as shown.

Just the head and mandrel are shown, that we may understand clearly the construction. It is as you see, really a small planer, having adjustable knives to be taken out and ground and set, like any planer knives. Besides these knives, there are four spurs, to cut the end of the wood down squarely. These are also adjustable, for grinding and setting. The machine is mounted on a frame, similar to the one above. The expense is exactly the same,—$30.00 for the whole machine, or only $22.00 without the table.



GRAY'S IMPROVED MACHINE FOR MAKING THE ALL-IN-ONE-PIECE SECTIONS.

The three saws are set on an arbor so as to be adjustable at different distances, as they were last year; but instead of a drum to feed the pieces, we have a table that slides back and forth. The stripes are placed in a sort of hopper, which you see rising above the rest of the machine. Well, this sliding table pushes one piece forward so as to slide under the saws. This allows the pile to drop down, and the slide then pushes another against it, and so on. The mechanism that moves the slide is as follows: On the opposite end of the mandrel that holds the saws, from the driving pulley, is another smaller pulley. A belt from this goes on a wheel seen in the lower part of the machine. On the shaft of this wheel is an endless screw, working in the teeth of a wheel attached to an upright shaft. On the top of this shaft is a crank that carries the sliding table by means of a pitman. The machine grooves 40 sections a minute. After some rather expensive experiments with saws made of teeth of different patterns, we have got one that cuts a clean, smooth groove, without any fibers hanging. Two of the teeth are large half-circles, something like a chopping-knife, and then comes on a straight square tooth, to scrape out the wood. Next, two more knife-teeth, and so on. The speed of these saws is about 4500 per minute. For making Farmer's honey-boxes, or boxes of any kind requiring wider stuff, the pitman is detached, and the sliding table is moved by hand. The machine, as it is now made, can not well be furnished for less than about $75.00. The handle at the right, is for stopping the feed; the rod in the centre, is to be pressed with the foot, when putting in more strips.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, FEB. 1, 1881.

Finally, by brethren, be strong in the Lord, and in the power of his might.—EPH. 6:10.

◆

WE have now 3563 subscribers, which is 921 more than we had last month. Thank you.

LOOK after your bees, and don't let them die; they will probably be scarce and high in price in the spring.

FRIEND Deworth has consented to have the price of his mandrel put at $2.50, as I suggested last month, instead of $2.75, and therefore $2.50 is the price.

OUR friends will see by our price lists, that we have succeeded in getting a reduced price on the Simonds saws that enables us to place them as low, or lower, than the common saws usually found at your hardware stores.

DID you ever! We have just received from the manufacturers a *solid cast-steel* adze-eye hammer, weighing 1 lb. 5 oz., that we can sell for only 35 cts. The hammer is exactly like the 75-cent one; only the polish is not quite as good. If wanted by mail, postage will be 24 cents.

WE have added to our printing-office a fine new Universal printing-press, especially for printing letter-heads, postal cards, bill-heads, etc. For specimens of our work, see the stationery we are now using. We shall next month have small job printing added to our counter store.

WHOLESALE PRICES ON COMB FOUNDATION.

IN answer to many inquiries in regard to the above, I would remind our friends that inasmuch as fdn. is offered in quantities for 35c, while the wax itself is 25c, there is no chance for a wholesale price. If you wish to sell fdn., you must buy a mill or machine for making it.

SEVERAL friends have asked us to keep their names going, and they would remit soon. Well, when they remitted they sent it to Doolittle, without saying a word to us. Do you not see, friends, how this "makes troubles come"? Nobody has authorized you to send money to friend D. that you are owing *us*.

OUR OWN BEES?

WELL, the most of them are wintering finely under the snow-drifts. Some of those in the house apiary are dying badly with the dysentery. Very likely it is because the snow-drifts can not cover them up, and because the hives do not get warmed up by the sun and dried out by the winds, as do the chaff hives. If you haven't got a house apiary, don't build one.

WHEN any watch is first wound, it frequently needs a little shaking to start it, and especially is this the case with the Waterbury watches, owing to the nature of their peculiar escapement. I say shaking, but it would be more proper to say "twirling." Several have returned their watches, saying they would not "go" when wound, but it was only because they did not start them. One came clear back from California.

OUR friend Oliver Foster has made very decided improvements in making fdn. We can hardly say by the dipping process, for he doesn't dip his plates at all; he, on the contrary, dips the wax on to the plates. The plates are kept constantly in water, or, rather, partially submerged in it. He sent us excellent samples of full-sized sheets, and I have ordered a machine. A full explanation, with drawings, will be given next month. I need not say that any thing coming from friend F. is free to all.

THE PEET CAGE.

WE have decided to adopt, for the coming season, the Peet cage, with the water-bottle omitted. The candy of which friend Viallon gave us the formulæ on page 427, Sept. No. for last year, has answered so well that we have decided to adopt it, at least for the present. Lest it may be thought we are appropriating friend Peet's cage without permission or recognition, I will state that I have paid him $25.00 for his invention—not that he did not give it freely to you all, but that he accepted the gift as a token of our appreciation of his services. I think we all owe him a vote of thanks besides. Do I not hear a second? All you who wish to tender thanks to friend Peet for his excellent shipping and introducing cage, as well as to friend Nellis for his zeal in bringing it so thoroughly before the public, please say — "Ay!" I shan't offer any "contrary."

WHAT TO DO WITH COMBS FROM WHICH THE BEES HAVE DIED.

I PRESUME I shall have to keep repeating, every spring, that combs and honey from which bees have died are excellent for new swarms, or even for putting a pound of bees and queen on, before new swarms come. A great part of the A B C class (and some others?) will have hives with the bees all dead every spring; and from reports, I think there will be an unusual number this spring. The hives may stand right where they are, if you are careful to close them up, so that no bees can possibly get in and carry off the honey left, as soon as they begin to fly. When it gets warm, it will be well to lift out the combs and brush out the bees; then you can set them back, and let them remain until you are ready to put more bees on them. Don't let any robbers get in, and you will be all right. If you have not got bees on all the combs by May or June, you will have to keep a little watch, and see that the moth miller does not get to working on them. The combs filled with stores are worth half the price of a hive of live bees, on an average. There is going to be a great call for bees by the pound in the spring, and our friends in the South should be able to do a nice trade on them early in the season. The fact of the bees having died on these combs will not hurt them a particle for use in the summer time, not even if they died with the worst kind of dysentery, but they may not be well to use for another winter. Get all such stores used up in rearing bees and brood.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

I have for sale one barrel of nice white granulated linden honey for sale at 10 cents per pound, including barrel. NATHANIEL MURRAY.
Ada, Hardin Co., O.

I have for sale 700 lbs. good honey, gathered from fall flowers, in one 22-gal. keg; the rest in 2-gal. tin honey-pails, at 13c per lb., money in advance. We will deliver on board cars. $1 50 extra for keg; cans, 25c apiece extra. DAVID KIRK.
Columbus, Cherokee Co., Kansas.

I have 4 barrels of light extracted honey, clover and basswood mixed. Barrels iron bound, painted, and waxed; will sell for 9½c on cars here.
F. R. JOHNSON.
Box 354, Union City, Branch Co., Mich.

I have about 1000 lbs. section and 1000 lbs. extracted white clover and linden honey for sale.
H. R. BOARDMAN.
East Townsend, Huron Co., O., Jan. 26, 1881.

CITY MARKETS.

CINCINNATI.—*Honey.*—Comb honey is of slow sale, and brings 16c on arrival. There is an active demand for extracted honey, which brings 8@10c on arrival. Choice clover honey scarce. I have paid 11c per lb. in several instances.

Beeswax—is quoted from 18@22c.

Cincinnati, O., Dec. 23, '80. C. F. MUTH.

Writing on the 24th inst., friend Muth says:—

> Market for comb honey is dull, supply about out. We have refused to pay 16 cts. per lb. for best. Demand for and sales of extracted clover honey is very lively, in barrels and small packages. We pay 8 to 11 for extracted honey. Our trade in 1-lb jar honey is increasing. I predict, that before many years roll around, extracted clover honey will bring a better price than comb honey.

Thanks, friend M. I have for some time been coming to your opinion in regard to extracted honey, and our little lunch-room is giving me an opportunity to watch the verdict of a large number of people. At first, they take comb honey, at 20 cents per lb.; but after they have tasted both a few times, they almost without exception decide in favor of the extracted, at 14 cents. This is largely owing to the fact that our extracted honey is good clover and basswood California honey. For convenience of the clerk, we have all kinds put up in 2-lb. cans and pails, at a uniform price of 14 cents per lb., can included. If the honey is to be taken in the hand, a pail is chosen; but if to be carried a distance, or packed with other goods, the "soldered-up-tight" cans are taken. We also keep it in 1-lb. tumblers at 20 cents, tumbler and all, and then give five cents for the tumbler when it is returned. As we buy most of the honey we use now, and we want to tell the full truth about it, we have a label printed for our 2-lb. cans and pails as follows:

TWO POUNDS

CALIFORNIA MOUNTAIN-SAGE HONEY,

FROM THE APIARY OF

R. Wilkin, San Diego, Cal.,

AND PUT UP BY

A. I. ROOT, MEDINA, O.

If this honey does not please in every particular, customers will confer a favor by returning it.

We will furnish the same with source and address left blank, for 25 c. per 100. If you take a whole thousand, we will put in the source and address; but as they are made large enough to go clear around the cans, you will have to pay 10 cts. per 1000 extra, if wanted by mail. Instead of gumming them, we brush them on with a solution of dextrine, brushing over the front as well as back of the label. The labels should be thrown right into the gum, and picked out and brushed on, one at a time.

CHICAGO.—*Honey.*—There is plenty of honey in this market to supply the demand, and prices remain the same on comb honey—20@22c for choice light lots in small boxes, and 12@14c for dark. Extracted honey, 8@10c.

Beeswax.—20@23c for light, and 15@17c for dark.

ALFRED H. NEWMAN.

972 West Madison St., Chicago, Ill., Dec. 22, '80.

Under date of Jan. 24th, Mr. Newman says:—

> The quotations on honey and beeswax for this market are unchanged. Light comb honey is a little unsteady, and the supply is equal to the demand.

ST. LOUIS.—*Honey.*—We have but little change to note in our market to-day. The stock of good white comb honey is light, and all offering is readily taken; extracted is wanted, and finds ready sale in both small and large packages. We quote comb, choice white in sections, 18@20c; larger packages, 15@17c; dark comb, as to shape, 15@17c; extracted, small packages, 10@12½c; in barrels, 8@10c.

COLE BROS.

No. 213 North Second Street, St. Louis, Mo.

NEW YORK.—*Honey.*—In reply to your favor of 22d, permit us to give you the following quotations: Best white clover, put up in neat packages, 17@18c; fair clover, 15@16c; dark buckwheat, 12@13c; light strained, 9@10½c; dark strained, 7@8c.

Trusting that this will be satisfactory, we remain

Yours truly, H. K. & F. B. THURBER & CO.

New York, Jan. 24, 1881.

Our Lunch-Room.

THERE is quite a number among you, my friends, who are making it a study to live with economy; not only economy in cash out, but economy in labor, for the housekeeper of the family usually has the hardest lot, in the way of work, of any one of you. In view of this, I know you will be interested in our experiments here in the problem of living cheaply. Most of our hands carry their dinners, and I have tried to see if we could not furnish them a dinner at less expense than they could take the time to carry it from home. Bread and butter seems to be the staff of life; but as we have not trained our steam as yet to do baking, we took a short cut something like this: Bread at the baker's costs not less than 5c per lb., while wheat is worth at the warehouse across the way, only about 1¾c; besides, 1 lb. of wheat will make a great deal more than 1 lb. of bread. Well, you can buy cracked wheat, with the hulls taken off, at your groceries, for about 5c per lb. One pound of this wheat, with 4 lbs. of water, boiled in our 25c farina kettles, makes 5 lbs. of excellent wheat pudding, at a cost of only ½c per lb. Just set it on the stove, and it requires no care whatever; and, when done, pour it into ten of those little half-pint pans that we sell at the rate of 2 for 5c. When it gets cold, it will turn out nicely, making ten little loaves, as it were. Turn them out on plates, set them in the oven until they are warm enough to melt butter; butter them nicely, and then put on your clover, basswood, or California honey, as you choose. One of these little loaves makes a pretty fair lunch; and if you ever ate a more delicious dessert, you ought to give God thanks after your meal, as well as before. Now, I haven't told it all yet. If you get some nice clean wheat and grind it in a coffee-mill, you will find it just about as good, unless you are fastidious about a little bran, and the expense is only about 2c per lb. instead of 5. Now, let us go a little further. Butter is just now pretty expensive, and honey may be also, for some of you. Dispense with both, and in place spread your loaf with the 7½-cent Amber sugar that I have mentioned elsewhere, and pour on a little milk. I am so fond of the Amber sugar, that I really prefer this last dish to the butter and honey. What do you suppose such a meal costs? Why, I would almost undertake to feed a hungry family of ten, with 10 cents' worth of wheat, sugar, and milk. Well, now, good friends, you who are trying to save money by close living, even this is not all. If you substitute nice white corn in place of the wheat, you have another dish for variety, and this costs only about half as much as the wheat does. Warm up these corn loaves with milk, pepper, salt, and a little butter, and you have an excellent breakfast dish. I have just been talking of taking our lunch-room over to the fair grounds next fall, to show them how quickly our smart girls can feed a multitude with the good things God has provided for us, and that, too, at a price that will astonish as much as did the household conveniences last fall. "Lou" says if we will give her steam to cook and wash the dishes, and plenty of help, she can manage it.

Butter and honey shall he eat, that he may know to refuse the evil, and choose the good.—Isa. 7:15.

Conventions.

CONVENTION DIRECTORY.

TIME AND PLACE OF MEETING.

1881.

May 10.—Cortland Union Bee-keepers' Association, Cortland, N. Y.

May 11.—Southwestern Wisconsin, at Darlington, LaFayette Co., Wis.

Feb. 24.—Washtenaw County Bee-keepers' Convention, Court-House, Ann Arbor, Mich.

Feb. 9.—Southern Michigan Bee-keepers' Association, Battle Creek, Mich.

Recent Additions to the

COUNTER STORE.

FIVE-CENT COUNTER.

Postage.]		[Pr. of 10,	of 100
3	Biscuit-Cutter	33	3 00
1	Charm Knives; a beauty; in pearl and shell handles, to hang on the watch-chain	45	4 20
3	Corn for planting, 3 kinds good for bees; ½ pint of best Early Sweet Concord, or Early Minnesota Sweet, or Mammoth Sweet, the last is the best, but it is not early	35	3 00
10	Clock or other shelves, a neat shelf to go with the 5c brackets	45	4 25
	GLASSWARE.		
	Honey Tumblers, with tin cover, holds exactly 1 lb., 6 dozen in a box for only $2.75		
6	Metallophone, or toy piano; a piano for only 5 cents	40	3 75
2	Nail Sets, best cast steel, tempered	33	3 00
1	Pencils, red one end blue the other, the best pencil of American Lead Pencil Co., excellent for marking slates to hives	40	3 50
2	Pilgrim's Progress, from this world to that which is to come	47	4 50
9	Stands, for hot dishes, bronzed	40	3 75
3	Tart-Cutters	35	3 25
1	Tweezers and Ear-spoons	40	3 50
2	Watch Chains, polished steel, neat and pretty	40	3 75
3	Wall-fenders, rubber capped, to screw in the wall to keep the door from striking	30	3 75

TEN-CENT COUNTER.

16	Brackets for holding clocks or other shelves, per pair, 4x6 in	90	8 50
25	Clock, or other shelves, a neat shelf to go with the 10c brackets	45	4 75
20	Coal Shovels, wrought iron, with a tin-covered handle to prevent their getting hot	85	8 00
4	Dish Cover, blued wire, 6 in	75	7 00
11	Hammer, Shoe, small size; nice for women and children — they can't miss the nail	80	7 50
	GLASSWARE.		
	Plain Goblet with engraved band	85	7 50
	Lamp hand, no burner or chimney	85	7 50
2	Rules, 2 Foot, Pocket, Box-wood	90	8 50
2	Saws, Bracket or Piercing, 6 different sizes for bracket work or sawing metals, 1 doz. for 10c. (For frames for the same, see 50c counter)	80	7 50
	Soap. "Gest's" Great, great in size of bars as well as in quality. It will not chap hands in cold weather. Bars weigh 1¼ lbs.	75	7 00
	Soap, Oatmeal "Creme" 3 cakes in a nice box for 10c	86	8 00

FIFTEEN-CENT COUNTER.

32	Brackets for holding clock or other shelves, per pair, size 6x8 in., very handsome. Neat and pretty shelves with drawer for above, same price	1 30	12 00
4	Dictionary, cloth bound, 25,000 words and phrases, and illustrated with 250 engravings, wonderful for 15c	1 45	14 00
13	Egg-beaters, "Family," a regular fifty-cent article	1 10	10 00
5	Files, double-ender, 7 inch, with handle	1 20	11 25
	Glycerine for making cheirogaphs, and to keep hands from chapping, etc., in large 4 oz. bottles	1 25	11 00
4	Knife, 2-bladed, well made	1 30	13 00
15	Spoke Shave, all metal, *a good tool*	1 30	12 50

Twenty-Five Cent Counter.

6	Butcher Knives 10½ in. long, J. Russell Co.'s best	2 00	18 00
18	Glue, 1 pound, for making Cheirographs, or Carpenter's use; an excellent article	2 00	18 00
10	Hammers, cast steel, riveting, for machinists	2 10	20 00
	GLASSWARE.		
	Honey Dish with cover, a magnificent piece of glassware, new design, just out	1 75	16 00

Thirty-Five Cent Counter.

7	Files, lightning cant, best for circular saws, 10 inch	3 00	29 00
24	Glue Pots, family, very handy	3 10	30 00
	Hammers, cast steel, riveting, for machinists	2 75	26 00
11	Hammers, fine steel, finely finished, although rather small is the best hammer that can be bought	3 25	31 00
3	Rules, 2-foot, brass-lined complete	3 00	28 00

FIFTY-CENT COUNTER.

7	Saw Frames, Steel, for holding bracket saws found on the 10 cent counter	4 00	37 50

Seventy-Five Cent Counter.

35	Honey Gate, extra large, whopper; tinned outside and in; and will screw into a barrel or solder into a can nicely	6 00	50 00

A. I. ROOT, Medina, Ohio.

JOIN our club and get *free* one pound package of a NEW SEEDLING potato—the finest we ever saw—or 20 Strawberry plants of varieties that sell for 50c to $1 per doz. Particulars free.
1-2 P. SUTTON, Ransom, Lack'a Co., Pa.

Our Catalogue

FOR 1881

IS NOW READY!

Sent Free To All. **Largest and Best.**

Every Bee-keeper who expects to purchase a dollar's worth of

Bee-keepers' SUPPLIES!

should read it. Send us

YOUR NAME!

ALSO THAT OF YOUR

BEE-KEEPING FRIENDS,

PLAINLY WRITTEN on a postal card, and it will be mailed you at once. Address

H. A. BURCH & CO.,
SOUTH HAVEN, - - - - MICH.

SECTIONS & HIVES!

We have concluded to extend the time another month. We will make the "Boss" Sections during the month of February, any size up to 5x6 for $5.00 per 1000. Material for Langstroth hive, 50c.

JAMES FORNCROOK & CO.
Watertown, Wis., Feb. 1, 1881.

Take Notice.—Patent pending on the "Boss" One-Piece Sections. 2d

---

CATALPA TREES

I will send, postpaid, to any part of the United States, 10 nice little trees, good roots, one year old, for 30c, or 100 for $2.50. Seeds, per package of 50, 25c. Seeds germinate as easily as corn. The Catalpa is one of the *best bee-trees!* Hangs full of long clusters of yellowish-white blossoms, very fragrant and ornamental, and yielding a heavy flow of honey. Wood very durable, shoots from young trees making grape-stakes which last for years.

2-4d H. M. MORRIS, Rantoul, Champ. Co., Ill.

1881.

Send for our new Circular and Price List of Full Colonies, Nuclei, and Queens. We guarantee satisfaction.

S. D. McLEAN & SON,
2-7d Culleoka, Maury Co., Tenn.

FOR Catalogue and Price List of young Sourwood, Black Locust, Buckthorn, Buckbush, and other forest trees and seeds,

Address CHAS. KINGSLEY,
1-2 Greeneville Greene Co., Tenn.

FRUIT TREES CHEAPER THAN EVER

As I am going out of the nursery business, I will sell apple-trees at the following low figures:—

4 years old, 6 to 8 ft., - - - $5 00 per C.
3 " " 5 to 6 ft., - - - $4 00 per C.
2 " " 4 to 5 ft., - - - $3 00 per C.

If taken by the thousand, 20 per cent discount. Any parties wanting 10,000 of the three different sizes, a deduction of 25 per cent allowed. No better trees are grown in the State than I offer. I have also pear and cherry trees, and other nursery stock too numerous to mention, at very low figures.

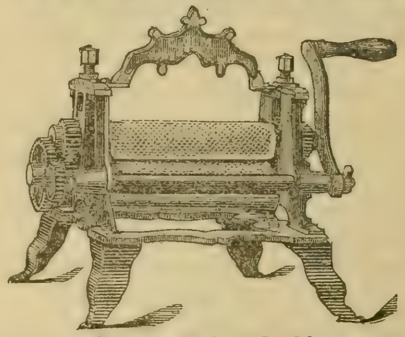
2-4d J. B. MURRAY, Ada, Hardin Co., Ohio.

FOR SALE OR RENT!

I will sell or rent my shop on easy terms. Built last year, expressly for manufacturing bee-keepers' Supplies; or I would take in a partner for a term of years—one capable of running that business. Shop well located, and business well started. Capital required in either case, about $500 down. Send for price list of Bees, Queens, and Apiarian Supplies.

2-3d I. S. CROWFOOT, Hartford, Wash. Co., Wis.

C. OLM'S COMB FOUNDATION MACHINE.



9-inch.—Price $25.00.

The cut represents the 9-inch machine; the cheapest made until now. Send for Circular and Sample.

2d **C. OLM**, Fond du Lac, Wis.

FOR WHAT THEY'LL BRING!

Thirty colonies of bees, Italians and hybrids, in good hives, and first-class condition, for sale for what they will bring. Address

2 C. L. STRATTON, Knoxville, Knox Co., Tenn.

CHAFF HIVES! A SPECIALTY!

SEND FOR CIRCULAR.
J. P. WATTS,
LUMBER CITY,
2-4 Clearfield Co., Pa.

FINE Concord grapevines, $1.00 per dozen, postpaid; 85 other varieties, very low. Also 5000 fine basswoods, 5 to 10 ft., 75c per doz.; $5.00 per 100.

2d F. L. WRIGHT, Plainfield, Livingston Co., Mich.

DON'T buy any Italian Bees until you have read my circular, which contains something new.

2-3d E. A. THOMAS, Colerain, Franklin Co., Mass.

BEE-KEEPERS' SUPPLIES

It will pay you to get our prices before purchasing your Supplies. Good Langstroth Hives with 8-inch cap, frames, quilt, etc., in the flat, 60 cents each. Manufactured from good pine lumber. Workmanship unexcelled. Crates, Sections, Extractors, and Dunham Foundation, a specialty.

HIRAM ROOP,
2-6d Carson City, Montcalm Co., Mich.

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QUEENS! Tested, $2.00; Untested, $1.00. Warranted, $1.35. Plymouth Rock eggs for hatching, $1.25 per doz. For price of hives and other supplies, send for circular. Address

3 HARTWELL BARBER, Adrian, Len. Co., Mich.

1881 QUEENS! QUEENS! 1881

We are prepared to furnish Queens in April, May, and June. For tested Queens, $2.50; afterward, $2.00; untested, $1.00. Queens reared in full colonies from imported mother. In addition to our imported Queens, we have some fine Queens in our apiary from some of the leading breeders of the U. S. We not only select our imported Queens to rear Queens from, but we select the best imported and the best home-bred Queens we have to rear drones from. We allow no colonies to have drones, except such as are from the choicest of our Queens. Satisfaction and safe arrival of all Queens guaranteed. No circular. HALL & JOHNSON,

3-4d Kirby's Creek, Jackson Co., Ala.

1881.- -1881.

ITALIAN QUEENS!

Single Queen, Tested	$2 00
" " Untested (laying)	1 00

Sent by mail and safe arrival guaranteed.

8 Frame Colony	6 00
3 " Nuclei	3 00
2 " "	2 50

Safe arrival guaranteed by express.

Address W. P. HENDERSON,

1-6inq Murfreesboro, Ruth. Co., Tennessee.

You must look out! I told you so!

For combs sagging, warping, and breaking down in the hive if you don't use foundation in wired frames. It is ahead of any thing in the foundation line for brood frames. I also make a very superior thin foundation for sections. Send for circular of Apiarian Supplies to J. A. OSBORNE,

3 Rantoul, Champ. Co., Ill.

BE SURE

To send a postal card for our Illustrated Catalogue of

APIARIAN SUPPLIES

Before purchasing elsewhere. It contains illustrations and descriptions of every thing new and desirable in an apiary,

AT THE LOWEST PRICES.

Italian, Cyprian, and Holy-Land Queens and Bees.

J. C. & H. P. SAYLES,

1-8d Hartford, Washington Co., Wis.

DUNHAM FOUNDATION, 35 Cts. Per Lb. Wax worked up, 10 cts. per lb. Cash paid for wax. For particulars address

3 R. HYDE, Alderly, Dodge Co., Wis.

50 FINE MIXED CARDS, with name, 10 cents, postpaid. M. L. DORMAN, Sinclairville,

12tfd Chaut. Co., N. Y.

THE A B C OF BEE CULTURE.

Bound in paper, mailed for $1.00. At wholesale, same price as GLEANINGS, with which it may be clubbed. One copy, $1.00; 2 copies, $1.90; three copies, $2.75; five copies, $4.00; ten copies, $7.50.

The same, neatly bound in cloth, with the covers neatly embellished in embossing and gold, one copy, $1.25; 2 copies, $2.40; three copies, $3.50; five copies, $5.25; ten copies, $10.00. If ordered by freight or express, the postage may be deducted, which will be 12c on the book in paper, and 15c each, on the book in cloth.

Cook's Manual in paper or cloth at the same price as above.

A. I. ROOT, Medina, O.

No. 132, Price 60c. **MAHER & GROSH, 34 N. Monroe St., Toledo, Ohio,** show here a new knife, No. 132, metal ends, strong blades; price, postpaid, 60c. Our goods are *hand-forged* from *razor steel*, every blade warranted, and exchanged *free* if soft or flawy. F. H. Day, Wilmington, Del., writes, Jan. 12:—"After receiving the knife I honed it down to a fine, keen edge, and tried it on hard, dry white-oak; the edge neither turned nor broke, which is more than I can say of any other knife I ever owned." We expect to build up our trade by selling GOOD GOODS; will you help us? Our extra-heavy 2-blade, made for farmers and mechanics, is the best knife in the market; price, postpaid, 75c. Boy's knife, 25c; ladies, 1-blade, 25c; 2-blade, 50c; Gent's 3-blade, $1 00. Extra strong *Pruner*, every blade tested, $1.00. Our hand-forged butcher-knife, 6-inch blade, postpaid, 50c. Illustrated list of knives, razors, and scissors, sent free to any address. 2-4

IMPORTED QUEENS!

In April, - - - - - - -	11	francs in Gold.
May and June, - - - - - -	10	" "
July and August, - - - - -	9	" "
September and October, - - - -	7	" "

Queens which die in transit will be replaced only if sent back in a letter.

CHARLES BIANCONCINI & CO.,
2-7d Bologna, Italy.

"W. O.'S" INK.

In 2 oz. bottles, black, violet, or blue, in ¼ gross boxes, per gross	$4 00
In quantities of 5 or more gross, $3,20 per Gross.	
In Pint Bottles, per doz	$3 00
In Quart " "	6 00
In Gallon Jugs " "	12 00

Green and Red ink are necessarily more expensive, and the price will therefore be *one-half more.*

Liquid Bluing, in 6 oz. bottles, per doz	50
" " " " " gross	$5 40

I will send ¼ gross, 2 oz. inks, assorted colors, black, blue, violet, and one bottle each of green and red, as a trial order for $1.00.

WM. OLDROYD, Columbus, Ohio.

Orders may be sent to me when more convenient.

A. I. ROOT.

HEADQUARTERS FOR

Early Italian & Cyprian Queens!

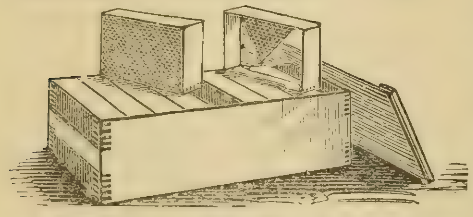
Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new circular. Address

1tfd DR. J. P. H. BROWN, Augusta, Ga.

Before Purchasing

any Italian or Cyprian bees, send for our 20th annual price list. Full colonies, Nuclei and Queens, at greatly reduced prices. Also headquarters for Apiarian supplies in New England.

WM. W. CARY & SON (formerly Wm. W. Cary),
3t1inq Colerain, Franklin Co., Mass.



28th Year---65 First-Premium Medals and Diplomas.

Send postal card with name and address for my new illustrated Circular and Price List containing valuable information to all bee-keepers. *Sent free.*

CHAS. H. LAKE,
Successor to the late Richard Colvin,
2-4d 96 West Pratt St., Baltimore, Md.

THE

British Bee Journal.

The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan. 1881. Will guarantee safe arrival of every No.

A. I. ROOT, Medina, Ohio.

RASPBERRIES FOR SALE.

	per doz. by mail.	per 100 by exp.	per 1000
Doolittle, - - - -	30c	$1 00	
Clarke's Red, - -	30c	1 00	
Mammoth Cluster, - -	40c	1 50	
Davison's Thornless, -	30c		
Ohio, - - - - - -	40c	1 50	$8 00

Ohio is one of the best; will yield a third more than any berry I know; is very firm and large; one of the best for drying; begins to ripen about the time of the Doolittle, and lasts till after the M. Cluster. Will pick as much as any of the varieties at a picking. It is equal to the Gregg, if not better. If by mail, add 20c per doz. J. IRVIN JOHNSON,
2-4d Box 405, Palmyra, Wayne Co., N. Y.

IMPROVED

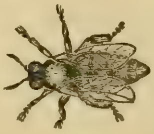
Langstroth Hives.

Supplies for the Apiary. Comb Foundation a specialty. Being able to procure lumber cheap, I can furnish Hives and Sections very cheap. Send for a circular. A. D. BENHAM,
2tfd Olivet, Eaton Co., Mich.

HEADQUARTERS FOR

PURE ALBINO AND ITALIAN QUEENS AND COLONIES for 1881. As I make queen-rearing a specialty, I guarantee to those ordering from me just what they bargain for. Circulars free. Address D. A. PIKE,
2-4d Box 19, Smithsburg, Washington Co., Md.

1881 ITALIAN QUEENS! 1881



Tested Queens	$1 50
Warranted Queens	1 00
Cyprian Queens, untested	1 00

As most all the Dollar queens I sold last year were pure, I will warrant them this year.

J. T. WILSON, Mortonsville,
2-7d Woodford Co., Ky.

Eggs for Hatching!

I was awarded first premium on Brown Leghorns and Black B. R. Game Bantams, at N. Y. State Fair, Albany, in Sept. last. Am booking orders now, to be filled in rotation, at the following very low prices:

Brown Leghorn Eggs, - -	$1 00 per doz.
B. B. R. G. Bantams, Imported, -	1 50 " "

With my style of packing, in new baskets, eggs will go safely any distance, and hatch. I guarantee safe arrival. C. W. CANFIELD,
Athens, Bradford Co., Pa.

N. B.—Above prices take the place of prices given on last cover of this journal. 3-6d

---

WESTERN BEE-KEEPERS

Can save money by sending for our new illustrated Circular and Price List of *Apiarian Supplies; Note and Letter Heads, Cards, etc.*

BRIGHT BROTHERS,
3-4 Mazeppa, Wabash Co., Minn.

TAKE NOTICE!

I will work this summer for some good straight honest bee-keeper, reasonably, as I understand all of its branches, and have had long experience. Address O. DOUGLASS, Whitmore Lake, Mich. 3d

---

SECTIONS AND HIVES!

We will make the dovetailed, or "Boss" One-Piece Section, any size up to 5x6 for $5.00 per 1000. Material for L. hive, 50 cents.

JAMES FORNCROOK & CO.
Watertown, Jeff. Co., Wis., March 1, 1881.

Take Notice.—Patent pending on the "Boss" One-Piece Sections. 3d

PURE STOCK!

I shall devote the coming season to rearing

Holy-Land Queens

for sale. They will be reared in an apiary by themselves, away from other bees. The price will be as follows:—

Dollar Queens, before June 15,	$1 25
Each, after that date,	1 00
Tested Queens, after June, each	2 50

Safe arrival and satisfaction guaranteed.
I. R. GOOD,
3-8d Nappanee, Elkhart Co., Ind.

15 ONE-CENT STAMPS

will pay for our exhaustive pamphlet on raising, handling, and marketing extracted honey.

COLONIES WITH IMPORTED CYPRIAN AND ITALIAN QUEENS OF OUR OWN IMPORTATIONS, GUARANTEED PURE AND GENUINE.

Our Comb Foundation was awarded the diploma at the N. E. Bee-Keepers' Convention held in February.

Smokers, Knives, Extractors, etc. Price list, with 3 samples of foundation, free.
CHAS. DADANT & SON,
3d Hamilton, Hancock Co., Ill.

HOME AT LAST!

Having bought the planing mill of H. C. Smith, and supplied it with new and improved machinery, and experienced workmen, I have 30,000 feet dry white pine lumber, and got the Simplicity Bee-Hive pattern of A. I. Root, and manufacture the Langstroth Hive and Apiarian Supplies. Send and get a Price List. SID. D. BUELL,
3-5d Union City, Branch Co., Mich.

COMB Foundation Machines from $1.00 to $5.00. Comb Fdn., less than 5 lbs., 40c; over 5 lbs., 35c; over 50 lbs., 34c; over 100 lbs., 33⅓c. Price list free. Italian queens from Imp. mothers, $1, ready in April.
3 JOHN FARIS, Chilhowie, Smyth Co., Va.

D. S. GIVEN,

Inventor and Sole Manufacturer of the

FOUNDATION PRESS.

All Presses warranted to give satisfaction. The only invention to make fdn. in wired frames. Our thin and common fdn. for '81 is not surpassed. Send for Catalogue and samples.
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CHEAP SECTIONS!

All One-Piece Sections. Pound and Prize size at $4.50 per 1,000. JOHN McGREGOR,
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Pure Bred Plymouth Rock Fowls

and eggs for hatching. Amber-cane seed, and Dhoura. Send card for circulars, etc., to
3-4d N. J. ISRAEL, Beallsville, Monroe Co., O.

GRAPEVINES!

A No. 1, by mail, *prepaid*, splendidly rooted, prices away down. Send for descriptive price list.
R. SHERFY (Round-Top Nurseries),
3 Gettysburg, Adams Co., Pa.

CYPRIANS and Italian Queens or Nuclei. Descriptive Circular and Price List sent free.
Address JULIUS HOFFMAN,
1-4 Fort Plain, Montgomery Co., N. Y.

At Kansas City, Mo.,

I breed pure *Italian* and *Cyprian* bees for sale. I warrant my "Dollar" queens to be mated by pure yellow drones, and guarantee safe arrival and perfect satisfaction.

Tested Queens,	in	May	$3 00
"	"	in June	2 50
"	"	after "	2 00
"Dollar"	"	in May	1 50
"	"	in June	1 25
"	"	after "	1 00

Bees, per lb., same prices as Dollar queens.

Please address all letters plainly to
3-5d E. M. HAYHURST, *P. O. Box* 1131.

GUARANTEED

Italian Queens!

I guarantee all my queens to be purely mated from imported mother. Safe arrival and satisfaction guaranteed. Send for circular. Untested Queens in May and June, $1.50. July and after, $1.00. Tested Queens, May and June, $2.50. July and after, $2.00. Select tested, $3.50.
Address— L. C. M'FATRIDGE, M. D.,
2-7d Carroll, Carroll Co., Ind.

HIVE MANUFACTURERS.

Also imported and home-bred Queens, Full Colonies, and nucleus colonies. Bee-Keeper's Supplies of all kinds. Market price for beeswax.
3 NICHOLS & ELKINS, Kennedy, Chaut. Co., N. Y.

GRAPE SUGAR
For Feeding Bees!

Send for our Price List before you buy.
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COLD-BLAST BEE-SMOKER!

Simple and durable, and not liable to get out of repair. Price $1.00. Write for a liberal discount on ½ doz. lots. Single smokers sent by mail on receipt of $1.15. Address W. W. VAN FRANK,
3d Newberg, Cass Co., Mich.

35 COLONIES

of Italian Bees in good condition, for sale; also two Faulkner Bee-Houses. Will sell cheap.
Address MRS. WM. STUMP, 19 Scott St.,
3d South Pendleton, Cincinnati, O.

Seeds and Plants!

My combined catalogue of Seeds, Plants, and Agricultural Implements, free to all applicants. Every thing warranted. WM. F. ELWOOD,
3d P. O. Box 526, Rome, Oneida Co., N. Y.

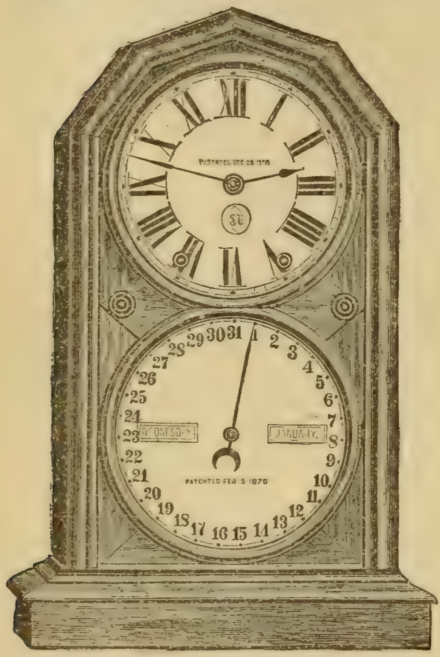
CHOICE ITALIAN BEES
AT ZERO PRICES

Dollar Queens, only 80c; Tested, $1.50. Ten-frame colonies, $5.75 to $8.00. Every thing first-class, and equally low. ☞ Send for circular, and *save money*.
3tfd E. A. THOMAS, Colerain, Franklin Co., Mass.

STRAWBERRY PLANTS!

Miner's Great Prolific, and Crescent Seedling, the two great market berries. All the best kinds by mail. Prices very low. Send for price list.
3-4 W. O. POST, Essex, Middlesex Co., Ct.

THAT CALENDAR CLOCK.



Last December one of our friends asked me what I could get 100 calendar clocks for. After some correspondence I learned I could get them so as to sell to our bee friends at the price given below. The following is a description of them.

The clock is 8-day, spring strike. The height is twenty inches, and the diameter of the dials eight inches. The case is beautifully finished in mahogany, rosewood, and black walnut. The works are heavy steel and brass. The calendar tells, in large plain figures and words, the day of the week, the day of the month, the month of the year, and makes all the changes for the different numbers of days in each month, even to giving February 29 days one year in four, without a single motion or bit of prompting on your part, only to wind the clock once a week. If the clock runs down by carelessness, you can set the hands of the calendar just as easily as you set the hands of a common clock. This latter feature is a late invention. Every clock is guaranteed by the Seth Thomas factory, and their name attached to any clock is about the highest praise you can give it. Send on the $7.50, and you can have your clock by return express. If ordered with other goods, they can go safely by freight, as each one is securely boxed by itself. They will be shipped from here.

Feb. 1, 1881. A. I. ROOT, Medina, O.

Feb. 9th, 1881.—The above was given in our Feb. GLEANINGS, but now the following is at hand, from the Seth Thomas Clock Co.:—

NEW YORK, N. Y., Feb. 2, 1881.

A. I. ROOT, ESQ. :—

Dear Sir.—We hereby withdraw our quotation made you Dec. 21, 1880, for our No 5 Parlor Calendar, in lots of 100. We do this because we understand you advertise to retail them for less than the trade can buy them. Yours respectfully,

SETH THOMAS CLOCK CO.

You will see, my friends, that my good intentions in the way of selling you clocks at a low price are, for the present, frustrated in spite of any thing I can do. The regular wholesale price of the clocks to dealers is $8.00, and my offer was a little under this.

I am very sorry for this unlooked-for mishap, and all I can do now is to make the price of the clock $8.50, instead of $7.50.

P. S.—Several have asked for alarms added to these clocks. With the experience I have had as a jeweler, I would not advise such an arrangement, but would rather have the small nickel clock we advertise for an alarm clock. This can be carried about anywhere like a watch, and can therefore, if you choose, be placed right at your head, in your sleeping apartment. Price $2.25; by mail, $2 40.

KIND WORDS FROM OUR CUSTOMERS.

The 12 Waterbury watches all sold at a good profit, and have given good satisfaction to every one.

Arcadia, Wis., Feb. 7, 1881. E. A. MORGAN.

The A B C is, in my estimation, the most valuable work of the kind published. I would not think of exchanging it for five times the cost, and do without.

Somerset, Pa., Jan. 31, 1881. A. H. FERNER.

I must say the A B C is the best book on the subject I ever read. It explains every thing so plainly, that any child can understand it by the aid of the nice engravings it contains. Oh how I wish I could spend a busy summer day in your apiary! I bought this book for my neighbor; but if I could not get another, I could hardly let it go. I learned more on one page than ten times the cost of the book, and that is in making hives, frames, and sections.

WM. K. DEISHER.

Kutztown, Berks Co., Pa., Jan. 29, 1881.

Dear Sir:—When writing to you, I say "Dear Sir;" but I feel like saying "Dear Brother." Many thanks for promptitude. WM. W. MCCLARAN.

Marshall, Tex., Jan. 26, 1881.

[Say "Dear Brother" by all means, dear brother M.; and when the time comes that you get tried with me, and I need reproving, then by all means remember to say, "dear brother Root," when you administer the reproof.]

I have succeeded, by disposing of some unprofitable property and close attention to business (outside of the bee business which has been more of a recreation than serious business), in freeing myself of the greater part of my indebtedness, and I trust that, if I am favored by a kind Providence, in another year or two I will be a free man once more; and when I attain that long-striven-for condition, I seriously contemplate giving my whole attention to the bee business, trusting that, by that time, I shall have attained sufficient knowledge and practical experience to enable me to conduct it successfully.

Now, why have I written in this manner to one who has never seen, and probably cares nothing for, me? Simply for the reason that I do believe you care for me and my success; not, perhaps, as an individual, but as one of a large class whom you have, by precept and example, induced to try a new pursuit—a pursuit that can not help, in the very nature of things, if he be observant and thoughtful, leading him to a better acquaintance with nature, and through nature to the Author and Giver of all good.

I have been for years trying to live a Christian life, and I assure you the Home Papers have helped me no little, and I am sure I am only one of many thousands who can thankfully say the same; and from my heart I say, go on; follow every leading of Providence, and success will surely crown your efforts here and hereafter. If I were as well assured that I were where I could be the most useful, I would be happier, and necessarily a better man; but "'tis a long lane that has no turning," and I think I see indications of a change, and that for the better; it seems at times to be so unwise to labor so hard and long for success in mere money-making, that dwarfs and numbs and deadens all of our better feelings. But pardon me for detaining you so long with merely personal things. Put this in the fire, and I will not trouble you in this line for at least another year, if ever. But take courage in your good work inasmuch as you have helped one poor fellow to strive more earnestly to "do justly, love mercy, and walk humbly before God." E. T. FLANAGAN.

Belleville, Ills., Feb. 5, 1881.

[May God bless you for your kind words, friend F. I do remember you, and pray for you; and I have thought of you every time I see anything from you ever since you told me about your business troubles. Try now to help others, in the way God has so graciously helped you, and make the beautiful little text you close with, your guiding star through life.]

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES AND HONEY, AND HOME INTERESTS.

Vol. IX. MARCH 1, 1881. No. 3.

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.
Established in 1873.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POST-OFFICE. Clubs to different postoffices, NOT LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

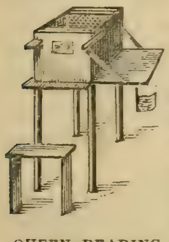
No. 16.

SOME HANDY, OR PERHAPS LAZY "FIXIN'S."

"WELL, wife, what shall I write about next?"

"Why, can't you think of any thing more to write about? Well, I thought that you would get all 'written out' after awhile. I guess that you had better write and tell Mr. Root about that *stool* that you were *going to make* last summer, and have strapped fast to you."

"No, I shall not say any thing about *that* (but it isn't because I am afraid that folks will laugh at me, you needn't think), but I guess that I will write and tell about having nuclei on 'stilts.'" Your plan, friend Root, of fastening the nuclei to the grapevine trellises, and using the hive below as a seat or table, is a good one; but if one has six or seven times as many nuclei as full colonies, some other plan has to be adopted. Last season my 80 nuclei were placed directly upon the ground; and, as I examined each nucleus every third day, besides catching queens and inserting cells between times, I found the stooping very tiresome. To rest my weary back I have frequently gotten down upon my knees, and, in extreme cases, I have sat "flat" upon the ground; and, as I neared the end of my task, I would count the number of nuclei yet to be visited, much as the schoolboy counts the days just before vacation.



QUEEN-REARING HIVE.

Now, just look at the inclosed pencil sketch, and you will see how I intend to arrange my nuclei the coming season. The stakes and seat are made of cull lumber. The stakes are just the right length to bring the hive at a convenient height for working while standing upon my feet. Do you notice those two little strips tacked to the sides of the hive, their ends projecting beyond the end of the hive? Well, these projecting ends are to hang frames upon. Inside the projecting end of the strip, fastened to the back of the hive, is tacked a piece of wood 1¾ inches wide, otherwise the space between the two projecting ends would be too wide to hang the frames upon. I said both of these strips were tacked to the hive; but it isn't so, as the one on the front of the hive is fastened with a screw. It rests upon a nail, and can be turned back out of the way when I wish to close the hive.

And did you notice how the cover is hinged on? Just two strips of wood tacked to the ends of the cover, letting them run down slanting until they reach the front edge of the hive, where they turn upon screws. The holes in the ends of the hinges are just large enough to slip over the heads of the screws, and, by springing the hinges out a little, I can, if I wish, remove the cover in an instant. When the hive is opened, the cover forms a nice shelf upon which I can set my smoker, box of brood, or lay queen cages or cells, etc. When caging queens I shall hang up the frame, and sit down and take my ease while catching the queen and the 30 or 40 bees that I am sometimes obliged to send with the queen late in the season.

I have just "figured up," and the cost of the material for these "fixin's" will be about ten cents per hive. Perhaps I shall whitewash the "stilts."

Perhaps, friend Root, you will think all this too much "machinery," but you will, I think, admit that it will be "handy;" and it was, I believe, from yourself that I obtained my first ideas of having things "handy;" and it has now become such a "hobby" with me that a visitor seldom "does" my establishment without exclaiming, from one to a dozen times, "Why, you have got every thing handy, haven't you?" W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

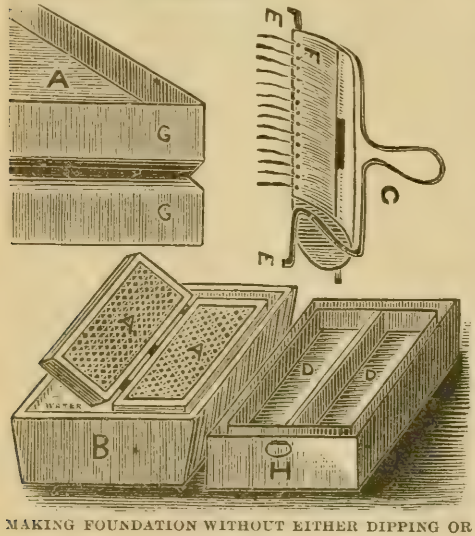
Very good, friend H. There is no danger of getting too many helps of the kind you speak of, if they are really helps, and not hindrances, when we take the whole into consideration, cost of keeping them in repair, etc. I have invented a great many helps and new plans; but somehow, as the years pass, the greater part of them get laid aside, and just now we are bringing our bees out of the house apiary, that we thought was going to be such a *great* help (in just the way you are talking about), and putting them in hives out-doors, because they not only winter better, but every one of the boys declare it is less trouble to handle them. Very likely your arrangement will be liked for queen-rearing; but I fear you will have to pull it up every winter, or the frost will make havoc with it. It is an excellent plan, nevertheless, to consider and discuss all these matters; for it is the real practical work of our favorite pursuit; how to handle a great number of colonies without hired help is just what we all need to know.

FRIEND FOSTER'S FDN. MACHINE.

THE NEW FOUNDATION MOLDS.

DEAR EDITOR AND FRIENDS:—I hope that your bees are all as comfortably packed this very cold winter as ours are. We are now settled in our new home, and of course are perfectly happy.

I have been improving the winter months by perfecting the method of making fdn. at one operation, and have succeeded beyond my most sanguine expectations. By the way, friend Root, since the Faris machine was described in every particular, save the leather strap. away back in 1878 (Aug., page 255), and since friend Harrison's machine was the same thing with *two* covers to his "book" instead of one, did you not greatly misrepresent the matter on page 582, Dec., 1880? I originally invented the machine in 1878, and there *gave* it to the public; therefore, any patent issued upon the machine itself is "null and void." Take and use it freely; but please let's not try to cover it with patents.



MAKING FOUNDATION WITHOUT EITHER DIPPING OR ROLLING.

In my last article I contemplated a machine for making wired fdn. at one operation. I now think that wired fdn. will soon be a thing of the past, as my experience for the past three years, with the unwired dipped fdn. in deep frames, has satisfied me that it can be used as thin as desired with no danger of its sagging even in the hottest weather. The machine as heretofore used has the following objections, which I have fully overcome:—

1. It is so heavy, if made sufficiently strong, that it is very tiresome to lift it from the wax to the water and back again.

2. We must wait until it stops dripping after dipping, which consumes time.

3. As both sides and all of the edges of one mold and its frame go under wax, it is obvious, that the wax is cooled and the water warmed twofold more than they would be if the wax only touched where it is to stay, thus consuming more wood and ice.

4. It takes longer to cool the mold and clean off the wax.

5. Dipping both plates, as per friend Bonham, page 26, partially obviates the difficulty; but "the remedy is worse than the disease," as it makes two sheets, which are imperfectly united, and takes double the wax.

6. The leather straps, as per friend Faris, prevent the mold from opening wide, and make it difficult to remove the fdn.

7. If the face gets too wet, as it does by dipping, the impression is imperfect.

All of these difficulties I have overcome in my new fdn. mold, described as follows:—

The frames are made of strips of wood ⅞x2 in. They must be very strong and thoroughly braced with iron rods running through the casts, to prevent the least warp or twist to which the plaster is inclined. The frames are hinged and filled in the usual way. They are each two inches deep for the sake of strength, but the plates need be only ¾ or 1 in. thick.

The molds, A, while open, lie flat on the surface of the water in the tank, B, face up. The one at your right is fastened in the tank with one inch between its frame and sides of tank. The other turns on the hinges, and, when resting upon a support in the tank, the face of each plate is level with the other, and about ¼ inch above the surface of the water all around. The face keeps just wet enough by absorbtion, and is constantly cooling and moistening. The wax is applied to the stationary plate by means of a wax fountain, C, which distributes it perfectly in a "twinkling," and the other plate coming down sends the surplus wax, if any, right into the water. The wax-fountain, C, is kept in the wax, D; it is taken in the right hand when the mold is worked with the left. It is placed in position over the lower plate, A, the ends of the bar, E, resting on the edge of the tank, B, upon which they slide, and which holds the fountain level. By raising the handle, C, the wax pours from the row of holes at F. It is drawn with an easy motion across the plate, beginning at the hinges. The moment it is off, the upper plate comes down by the left hand. In a moment it is ready to open, and a perfect sheet of fdn. lies before you, with only a slight margin. When this is removed, all is ready for another. The edges of the lower plates are slightly raised to prevent the wax from overflowing, and the upper one fits over, something like a Simplicity-hive cover, G, throwing the wax *down* so that one can work in his "*broadcloth*" if he likes. As there is next to no cleaning up of scraps, and no lifting, the work pushes right along. I think I can make up 75 lbs. per day of perfect fdn., L. or any other size.

DIRECTIONS FOR USING FOSTER'S FDN. MACHINE.

Place the tank on a box or stand, level with the stove. The piece of tin on the edge of the tank should project inside the wax-pan on the stove. Lay the strips of wood across the ends of the large pan, and rest the wax-pan on them. Use the fountain in either side of wax-pan you like, the lumps of wax in the other. The fount runs on the track both ways, with the handle level when not "pouring." The screw in the tank holds the bed-plate securely in place. *Be sure* to let the mold *thoroughly soak* (covered with water) before beginning, and if it gets too dry by rapid work, sponge it off. Keep ice or snow under the bed-plate. You can "hurry" the cooling of the marginal wax after pressure by dipping a block or something into the water, thus raising the surface to the face of mold. I would not let the mold mold freeze while full of water.

I hope soon to produce a machine with metal face that will work this way. I will re-fill frames with plaster for $1.00.

I hereby make these inventions public property. You can make the machines yourselves, or I can furnish them as follows:—

One pair of molds, $5.00; water-tank, $2.00; double wax-boiler, $2.00; wax fountain, $1.00. All complete, packed in tank as shipping-box, $10.00. Fdn., per lb., 40c plus 10c for each package. Price is for L. size. OLIVER FOSTER.

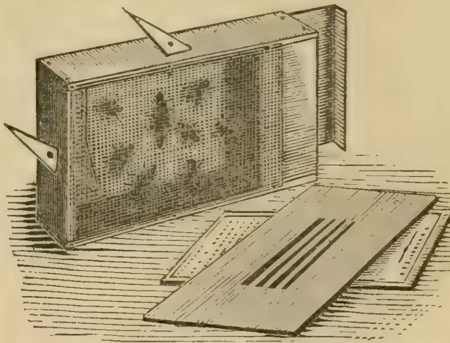
Mt. Vernon, Iowa, Jan. 22, 1881.

We have the machine here with us, and it is a success without question. The figure at the upper left-hand corner is to show how the plaster plates close together. Well, after the sheets are made, they have to be trimmed, and the trimming takes more time than to make the sheet. Mr. Gray took a look at it, and soon made a pair of plates with galvanized iron around the edges, so that when the plates were closed, the surplus wax could all be taken off clean, leaving the sheet all ready to be put right into a wired frame. The only trouble is now the frail nature of these plaster plates. We have a pair of metal ones, but they won't work, because they are not porous, like the plaster, to hold water; also, we want to combine this idea with that of the Given press. Do you not see again, friends, how all this progress is the work of many hands and brains? It is but a few numbers back, that a suggested putting the wax on with a broad brush, and Mr. said a year ago, that wax could be poured on the plates through a narrow slit. Friend Foster has invented the fountain and the row of holes, and it works, too, like a charm. I have placed to his credit, for the same, $25.00, although I shall not make any of the machines, and very likely the whole may be laid aside in a few months for something still better.

* * *

THE PEET INTRODUCING CAGE, AS WE MAKE IT.

THE cut below will make the whole matter plain, almost without a description. The cage is about 2½,x4½ inches. The side pieces, are made of strips 7-32x9-16. The side pieces are each 4½ inches long. The end pieces are each 2⅜ long by ½ inch thick; you will see this brings the thickness of the ends 1-16 less than the sides, to let the tin slide run over the ends. The end piece that holds the candy is made from a piece ½x1½; but before nailing the box together, a place is sawed out to receive the candy, so only about ⅛ of an inch of wood is left on the bottom and end. With a very fine saw, grooves are made for the tin slide to run in; this slide is bent as shown, for convenience in withdrawing. A corner is clipped form the othef end, that the cage may be opened so one bee can be put in at a time, when caging the bees and queen.



PEET'S INTRODUCING AND SHIPPING CAGE.

The tin points are for fastening the cage securely into the comb. Directions for doing this are pasted on the cover of the cage, seen in the foreground. These are simply pieces of basswood, of the cage, one of which has the grain of the wood running crosswise, to prevent the liability of damage in the mails. The other little board we drop on our grooving saws, to cut the ventilating holes shown in the picture. When ready to mail, the tin points are turned down, the little boards placed on each side, and the whole wrapped in stout flour-sack paper, after which an opening is cut or torn right over the ventilating slots. It will be observed we have no bottle of water in this cage. The reason is, that friend Viallon's candy seems to hold moisture enough without it. We will give the recipe for this candy again, as it may not be familiar to some of our new readers.

Take 12 ounces of powdered white sugar, 4 ounces of Louisiana brown sugar, one table-spoonful of flour, and two table-spoonfuls of honey, stir well together, and add just enough water to make it like thick mush; then bring it to a boiling point, or if too much is added, boil it a minute or two; then stir it well until it begins to thicken, and pour quickly a table-spoonful into each cage.

The peculiarity of this candy is, that it never dries, but remains soft and pasty, but yet not enough so to daub the bee.

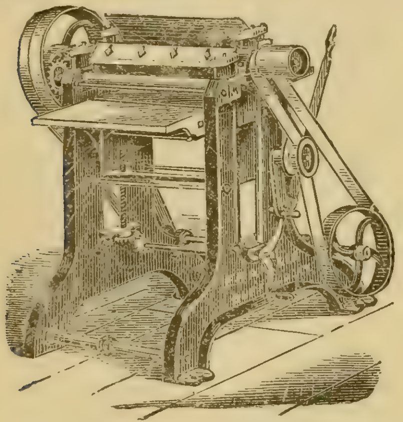
* * *

NEW TOOLS.

PLANERS USED BY MANUFACTURERS OF BEE-HIVES.

I LAST month mentioned that we had been enabled to substitute the Gem planer instead of the Lilliputian, which we have sold for the past few years. As several inquiries have been made about this and the Pony planer, I have thought best to give you drawings of each. The cheapest planer made is the Cigar-Box planer, shown in our price list, and used, principally, to plane stuff for sections. These planers are designed for planing cigar-box lumber and other kinds of planing where very smooth planing is needed. The 9-inch is now offered for $55.00 net. It planes only ⅝ in thickness. The next and largest size Cigar-Box planer, 12-inch capacity, is $70.00 net. Countershaft for either of the above is $12.00. It has two feed-rollers and two speeds of feed. It has a pressure-bar between the back feed-roller and the cutter-head that holds the lumber to within ¼ inch of the cut of the knives. Pieces as short as 4 inches can be planed in this machine without chipping the ends. It will plane from ⅛ to 4 inches in thickness. The cutter-head is made of steel, and the cutters capped very close, to prevent tearing the lumber when it is very cross-grained. The tight and loose pulleys for counter-shaft are 6 inches in diameter, and 3-inch face, and should make 1000 revolutions per minute.

The next is the Gem, of which we have been speaking, and of which a cut is shown below.

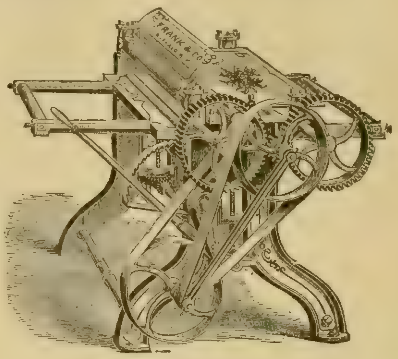


THE GEM PLANER.

This is a new pattern of planer, combining many points of the Pony, some of the Lilliputian, and some not possessed by either. It has two feed-rollers, one before and one behind the cutter-head. The position of the cutter-head is not changed for different thicknesses of planing, thus giving the same tightness of driving belt, no matter from which direction it is belted. It has two speeds of feed, obtained by the use of cone pulleys. It is very easily adjusted, requiring the tightening and loosening of no bolts or screws to change for different thicknesses of planing. It works well on either hard or soft wood. Four sizes are built, to plane 12½, 16, 18, and 20 inches wide, and up to 6 inches thick. Prices are $55.00, $70.00, $77.00, and $85.00 respectively; counter-shaft, $15.00 more.

The next is the Pony planer. Perhaps it may be well to remark, that the 24-inch Pony planer does all the planing for our bee-hive factory, with the assistance of a 9-inch Cigar-Box planer for sections.

They will plane 6 inches thick, and as thin as ⅛ inch, and in quantity from 8000 to 18,000 feet in ten hours, and plane smoother than the average of high-priced planers. Their extremely low price brings them within the reach of those of small means, and their size adapts them to many small shops where a large planer could not be used, and their simplicity renders them easy to be operated by the inexperienced. Improvements have been made, so that there are no screws or bolts to be loosened when the machine is changed to different thicknesses. Four sizes are built,—16, 20, 24, and 30 inch. Our prices are as follows: 16 in., $125.00; 20 in., $135.00; 24 in., $150.00; counter-shaft, $20.00.



PONY PLANER.

In regard to the power required to run these planers, the Gem and the Cigar-Box are, either of them or both, run nicely by the two-horse-power engine we advertise, and the larger engine will be ample to run any of the Pony planers; in fact, the smaller engine would answer, if no great amount of work were to be done. The prices I have given are *special rates* to our bee friends; they are not usually sold so low.

THE demand for bees by the ℔. is going to be immense, and I must again enter my protest against your insisting that they shall all pass through my hands. As they must all go by express, and as the charges will necessarily be high, we can not think of two shipments. Quite a number have offered me bees at half my advertised prices, but I can not do it, even at that. You can ship directly to consumers as well as to me. Losses will come, I know; but let each party make up his mind to bear *more* than his share, and to have lots of charity and sympathy for those who lose, and we can help each other greatly. Let us first agree upon a few simple rules, such as, that the shipper agree to deliver the bees alive at the nearest express office, and no more; that the one who orders must give his town, county, and State, and both express and post office. Cages for shipment are a very easy matter to furnish, by simply looking at the cut in our price list; viz., a couple of sections with a band of wire cloth between them, and a bit of leather for a handle, so that they may be lifted when handled, without being tumbled about. This is for ½ lb. of bees. For 1 lb., use three sections and two bands. Each section is to contain two cakes of the Viallon candy. If it happens that water is needed, each section may also contain a tin water-bottle, as advised last year. We can furnish cages for ½ lb. of bees, for 10 c.; candy included, 15 c. For 1 lb. of bees, 15 c.; candy included, 25 c. Cages without the candy can be sent by mail for 5 and 10 c. additional for postage. All who will undertake to furnish bees at the prices we advertise, can have their names given without charge in our April number. Bees are not mailable, except the few that accompany a queen when sent by mail.

FRIEND STANLEY'S STORY CONTINUED.

WHAT HE "DIDN'T" DO IN 1880.

WELL, well! that old letter is scratched up out of the basket after 12 months' confinement for its length; good! Well, 1879 was a fair year. I wintered all through, even 3 and 4 frame nuclei, and had 125 to begin with, including the 30 nuclei. I hired a man to watch them and hive them when they swarmed, and put in starters in boxes, and I visited them when I could, staying with him one or two days in a week (I had to do all the manipulating of them), until about the middle of June. After that I spent most of my time there, and I got 50 lbs. of honey to the hive—⅔ box, and ⅓ extracted; 75 increase, some of the 75 being mere nuclei. I also transferred some 75 or 80 stands of bees, and sold nearly 100 empty hives; with what I had, and those on shares, all together gave me, in the spring of 1880, 240, 50 of which were very weak and short of stores; but I lost but one by starving, and it was overlooked. (I will just state here that 40 of them came from within 2 miles of Dr. Newell's, who, I see, reported his all dead.) I doubled back to 215 in April; gave up every thing else, and we (myself and wife) went to bee-keeping for a living, and the result is, we are on short rations; 10 lbs. of box and 1½ of extracted, and not of good quality at that; but it is mostly sold at 20 cts. for box, and 15 for extracted. I ran up to 280 in Aug., and doubled back in Oct. to 2[illegible]5, all with plenty of honey.

WHAT THE BEES HAVE DONE IN 1881 SO FAR.

Jan. 30th was the first day since the bees were shut in that they could fly; and as I was 10 miles away, as soon as I ate breakfast I started for my bees. I had that evening and until 2 o'clock the next day to look; and for the first time I then saw and felt what it was to see dead bees; 50 stands frozen dead, and all weakened down; I think the hives will average 20 lbs. of honey to the hive now. I think some froze in November. I could scarcely miss any honey out of some hives. I could not help thinking of A. Grimm's observation to a friend when I looked at those nice combs of honey; viz., "Won't I have a nice time raising bees next summer?" I was not surprised at the loss, and am very thankful it is no worse.

THOS. C. STANLEY.

Jeffersonville, Ill., Feb. 8, 1881.

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THE SPIDER PLANT.

PLANTS RAISED UNDER GLASS, AND THOSE RAISED IN THE OPEN GROUND.

AS I have before promised I will now give in my report on Spider plant for last season. Of the 5-cent package of seed I got of you I planted about one-half of them late in March in a box under glass—not in a regular hot-bed—from which I raised about 50 plants; the rest of the seed I planted early in May in open ground, and got also about 50 plants from them. Nearly all were transplanted when about 3 inches high; the first bloom appeared about July 15th. Bees did not notice them for a week or more; the first planting did not bloom over two weeks ahead of the rest, although planted nearly 8 weeks first. All plants bloomed until the late hard frost killed them. When the weather was wet, or moderately so, that big drop of honey would always begin to show at about 4 or 5 o'clock P.M., and keep increasing until dark—or, I rather think, until daylight next morning; for in the morning thousands of them could be seen,—I would say as large around as a common lead-pencil, without straining the matter at all. I did several times take off stems with the drop of nectar, and take it to show some of my neighbors, but would have to handle them very steadily and right side up, or the drop would spill out. I observed that, whenever the ground got dry the drops would not appear in proportion to the dryness, until there would be none at all, when a good rain would produce them again. It is scarcely necessary to say, that the bees worked upon them just in proportion as they produce the nectar. In the fall I had plants that spread at least over 5 feet of ground, and an inch and a half stock at the ground. From the hundred plants, I saved about 10 lbs. of seed. I consider the Spider plant as very valuable as a honey-plant for cultivation.

A. A. FRADENBURG.

Port Washington, O., Feb. 14, 1881.

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SOME EXCEPTIONAL FACTS.

FRIEND HASTY'S REPORT OF THE WINTER.

UP to Feb. 11th, the death-roll in my apiary is 15 out of 104. Dysentery and its consequences is the cause of the most of it. Some strong colonies, very warmly packed, got a drift of dead bees clear up among the frames, that couldn't well be poked out from the entrance. Next the living bees, still strong, got in a rage at finding themselves prisoners, or possibly at the smell, and made such a heat that they *melted the combs down.* A little queer for such a cold winter, is it not? The colony I meant to rear drones from went this way; also one with a fine Italian queen from W. Z. Hutchinson.

Part of the hives were not very warmly packed. These ate honey at such a rate that several of them starved before I got wind of what was going on. I thought I was making examinations enough to be quite safe; but there was a corner where I didn't look.

With one exception, all these 15 extinct colonies are blacks. The hybrids, numbering 37 (more than a third of the apiary), have lost only one; and that one was weak and in a bad condition last fall. As a general thing, I plumply don't believe that hybrids winter better than blacks; but here is the fact notwithstanding.

DO THE BEST HONEY-GATHERERS WINTER AS WELL OR BETTER THAN OTHERS?

The stands that made the most honey have suffered the most. The honey record of the 15 is as follows: Three of them made more than three times the average of the apiary; five others made about twice the average, or upwards; three others made considerably more than the average; and only four made less than the average.

This time I will not theorize on these facts, but just stop short. Would like your experience, friend R., whether colonies that make the most honey are generally more apt than others to give one the slip in winter.

E. E. HASTY.

Richards, Lucas Co., Ohio.

My experience has been rather to the contrary; and if I am not mistaken, those colonies that every year were strong, and every year gave a good surplus, always wintered well, unless they were divided, or otherwise tinkered with. You are doing pretty well, friend H., but we do not want you to let any more die through neglect.

WINTERING BEES.

AS near as I can "glean," one-half to two-thirds of the colonies in this county are now dead. I have not lost any yet, out of the 200 or over, that I am keeping. I think some 5 or 6 show signs of dysentery. When I see signs of this disease on the outside, I know just what kind of bees will be found within. I am not afraid of any *serious* loss, even if winter lasts till May 1st.

CAUSE OF DYSENTERY.

I have observed numbers of dead colonies, and I am more than ever convinced of my previous opinion, that the *cause* of dysentery is an undue amount of animal or vegetable particles, so to speak, in the honey the bees are wintering on—probably the former—a *bacteria* that infests honey while in the blossoms, or otherwise; that the greatest *aggravations* of the disease are cold and confinement. Cold, because of the more honey consumed, and confinement, which prevents the voiding of the poisonous accumulations. Cold and confinement, without this bacteria, will not cause dysentery. These bacteria, without cold and confinement, will not show themselves.

The above is the only theory I can imagine, that will fit all the cases that have come under my observation. I *believe* it, because we so plainly see this great law in the animal and vegetable world, that one life exists at the expense and death of another. Man comes into the category as no exception.

SUGAR SYRUP OR HONEY FOR WINTER STORES.

In my judgment, the best preventive is perfect stores, which may consist of that substance which contains the greatest amount of oxygen with the least amount of residue. No doubt that a syrup made from pure refined cane sugar is the nearest to the above description of any practical material we can use. This, however, does not argue the use of the sugar syrup in all cases. Many seasons, and *all* seasons in some localities, the honey is of such good character that bees winter well upon it, even when unprotected, and during severe winters.

COMPARATIVE COST OF EACH.

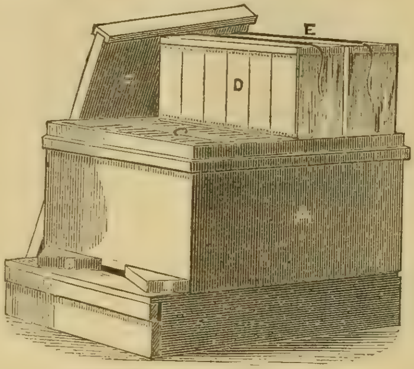
Now that the syrup costs all or more than the cost of honey, and that we must empty the combs *after* all gathering ceases (and the bees rob so badly) and then do the feeding, I am persuaded to take the risk, after I have protected the hive as much as I can consistently, rather than to extract and feed. I delight in light hives in the fall. When the *cause* of it is that the bees put "too much" above, then I will make up the deficit with properly prepared sugar syrup. Where honey is very much more convenient and cheaper, and you wish to feed it, heat and skim it before so doing.

THE HIVE ALONE NOT A PREVENTIVE.

The idea that any style of hive induces or will prevent dysentery, should be laid away among the old superstitions. That some styles of hives will better enable the bees to get at their stores in winter (and thus prevent *starvation* where plenty of honey is therein contained), is true. Also that some are better adapted to the convenience of the bee-keeper, as well for *packing* as for manipulating the brood and surplus combs, is also true. Different bee-keepers have different and chosen methods and preferred styles of hives. Our experience has been with large numbers of colonies, and we consequently do not attach any other business to the one of honey-producing, nor do we need to. It not only has had to support itself, but a growing family, and capital besides. But to the best methods of protecting the hives for wintering on the summer stands.

REASONS WHY FRIEND H. DOES NOT WANT A CHAFF HIVE.

To begin with, I can not affiliate with the chaff hive. It will not do me for a larger business; it costs too much; it is not so durable and strong; it is too heavy; it is not thick enough on its sides. I can not adopt a hive that makes me work *through* one story to handle the combs in another.



FRIEND HEDDON'S HIVE.

The cut shows you the style of hive that I use and prefer, and now I will try to explain to you the method I use to protect from 300 to 500 of them in the cheapest, safest, and most practical manner, as viewed from my standpoint.

The cut shows you the cover to the rim-cap, which is a common cap (without top or bottom) but this rim is not shown. Please imagine the surplus sections off the hive; also the honey-board.

First, I lay two pieces of basswood, previously bent bowing thus ⌒, across the hive, each end fast within the side walls, and the bows about six inches apart. (The bows are 12x⅞x3-16 before bent, and the hive is 11½ inches wide in the clear;) then a piece of burlap, or any other cloth. Now put on the cap-rim, and fill with dry chaff or planer shavings, and place on the cover shown in cut. Now, is not the *top* well packed? Now, what is the cheapest and best method to protect the sides? I first make a "bridge" that is composed of two little boards ⅜x3x11½, and two pieces ½x⅞x7 inches. The boards are so nailed to the pieces as to form a bridge and alighting-board, both; and when adjusted can not move from its proper position, as the projecting ends of the pieces run into the entrance one inch.

Next I make a rim of cheap boards; by "rim" I mean a box open top and bottom, about 18 inches wide, all but the front end, which is composed of a narrower board only 12 inches wide. Set this rim over the hive, and draw the bottom edge of the narrow board up tight against the bridge-board. Now, you see the sides and back end rest upon the ground, and the narrower front end upon the bridge pieces. Now fill between the hive and outer rim (we use a five-inch space on sides and back, and 3 inches in front), with sawdust or chaff. If chaff is used it should be packed very firm, and a little straw the last thing on top, and earth upon that to hold it down, and exclude the air better. We much prefer sawdust, as it is a little better conductor, and is just a splendid litter for the apiary ground. Now we place over all our wide shade-board, and that ends the job.

You will see that we make the cap-rim serve the double purpose of surplus in summer and protection in winter. Further, that the little bridge and the rough board-rim are our only outlay; that the sawdust is just where we want it when we are through with it in the spring; that the chaff or shavings above are easily held in a small bin. The board-rims are piled up out-doors.

We have now used this method three years, and alongside of costly boxes made all nice and light, and painted, and it is as perfect in its results as the more costly and complicated method. The earth does not dampen the sawdust. The rain does not wet it. We have not described this plan without first knowing that it was cheap, practical, and as safe as any out-door method of wintering. We have found planer shavings fully the equal, if not superior, to chaff, as an absorbent and protector, and with us they come much cheaper. We maintain that walls of sawdust are better than chaff because they are a better conductor of heat. Chaff walls are better than a dead air space, just in proportion as they are a better conductor. A wall that is a partial conductor is capable of absorbing heat from the bees, which would otherwise escape by circulation through the entrance, during a higher degree of temperature; also of absorbing much heat from every ray of the winter's sun that strikes it. During the breeding-time of spring, are these slowly absorbing walls of much value. No *side* absorbents are required when the whole top of a flat hive is exposed to them. We think the day is close at hand when side absorbents, division-boards, side storing, and short or deep frames will have but few if any advocates. We consider the L. frame by far the best shape; but if only *equal* to other styles, we would as surely adopt it as we would have a wagon tracked the same width that other folks used. Every implement I ever saw or heard of, that was made to accomplish many objects, was like the stove-hook, pie-tin holder, glass-cutter, tack-hammer, screw-driver, and, and—(ours is lost; it never was used)—good for nothing really. The hive is no exception to that rule.

In this article I have given you my reasons for the opinions I have been forced to hold, from actual experience. JAMES HEDDON.

Dowagiac, Mich., Feb. 12, 1881.

In regard to the comparative cost of sugar or honey, I would add, that even granulated sugar can be bought now for only 9½c. per lb., in New York; and as 1 lb. of sugar makes 1⅓ lbs. of very fair syrup, the cost is only about 7c. per lb., while good white honey ought to bring at least 10c. Perhaps this difference would hardly pay for uncapping the honey and feeding it after all, unless we were pretty sure the honey was not as good food for the bees as sugar.—In regard to the chaff hive, I would remark that our honey reports for a few years past seem to indicate that the chaff packing is about as important in summer as in winter. If one stands up while he handles the frames, by leaning against the edge of the chaff hive he can reach down into the lower story almost as well as if no upper one were in the way; but where the frames are handled a great deal, as in queen-rearing, and one sits on a stool, he can certainly get along faster with a one-story hive only. I do not like the idea of those great rough boxes, and the task of putting them on and taking them off every spring and fall, friend H.; but very likely it may suit you and a great many others, better than the more expensive and permanent chaff hives. I should be inclined to give chaff the preference over sawdust; but if you succeed in wintering your large apiary clear through in that way, we shall have to say as we do with friend Doolittle, that success is the best proof we can have of whose ideas are the right ones. Let us know just how many you save and how many you lose by May first, will you not, friend H.?

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ONIONS AS A HONEY-PLANT.

I WANT to plant an acre of onions. Would not the "English multipliers," or potato-onion sets, be the best and surest crop for first season? or would you think the Flat Italian Tripoli the best in seed or sets? I know this does not belong to bee culture, but I thought you could give me the information, and price per bushel or barrel of sets, and might furnish them cheaper. I got Early-Amber sugar-cane from you for just one-fourth what seed-stores sell it at. G. A. WILLIS.

Enfield, Ill., Jan. 21, 1881.

As I have had no practical experience with onions, I submitted the above letter to neighbor H., and here is his reply:—

The multipliers, or potato onions, are an old standby; come off early, and are good for summer and fall markets; but it is more work to set them out, the sets cost much more than the black seed, and they will not yield nearly as much per acre. The great onion crop of the world is raised from the seed. I would not recommend the Flat Italian Tripoli, as they grow too large and coarse, and are apt to crack open; are not good yielders or keepers. The best and safest varieties, in our opinion, are the Yellow Danvers and Wethersfield Red. The land must be very fine and rich; manure from under an old stable is best. Sow in drills about 14 inches apart as soon as the ground will work, in March if you can. In raising seed, select the onions of a fair size; those with small tops; plant in drills from 3 to 5 inches deep; hill them up as the tops grow heavy, to keep from falling down; they make a beautiful flower-bed, and the honey will glisten in the large white blossoms from morning till night. The seed-stores sell onion seed from $2.00 to $5.00 per lb. With the experience I have had, I think it could be raised for 25 or 50 cents, at a fair profit. H.

BOYS, would you like to be told of a plan by which you could be almost sure of having any business man in the land hasten to do your bidding with alacrity almost as soon as you made your wishes known? Well, it is partly accomplished by having a reputation of never having been dunned. I do not mean that you should never go into debt, but that you should always make an agreement as to just when you wish to pay, and then always be on hand with the pay, unless *freely granted* permission has been given you to let it run longer.

FOUL BROOD.

HOW DISTINGUISHED; HOW CURED.

WE are requested by several to give an article on foul brood. Well, what are we going to do? We have several articles blocked out in answer to as many questions, but we can't get time to write them. We are booked as a correspondent to six different papers, and have a correspondence of from 10 to 30 daily, besides the work required at all seasons of the year to make a success in managing 100 stocks of bees. Well, we are going to request all of our correspondents to put their questions on a separate sheet of paper from their letter, and leave room under each question for the answer, thus saving us the trouble of writing both question and answer, thus hoping to gain time to write more articles, or at least fill our present engagements. All questions thus arranged will be cheerfully answered. If of general interest, we shall reserve the right to answer through the bee journals.

FOUL BROOD.

Father kept bees when we were about ten years old, and it is one of the pleasant memories of the past that frequently come up before us, of the nice white box honey that was taken from the bees in 16 to 20 lb. boxes that went to buy the family the comforts of life. This was when the bees were prosperous; but the time came when no swarms issued, and the bees got to robbing each other in the fall, and, as a last resort, all were brimstoned one cool morning the fore part of October. We were anxious to see the inside of a bee-hive, so were close at hand when father announced that he was about to take the honey from the hives. The hives were turned over, when our olfactory organs were greeted with a stench never to be forgotten. An examination revealed combs filled with dead brood which was one putrid mass, with here and there a vacant cell from which some bee, more lucky than his fellows, had hatched. Thus hive after hive was split open with but little variation, except in a few of the stronger colonies, whose cells were probably quarter filled with this dead brood. We have given this to show you foul brood in its worst form as it used to scourge N. Y. State in 1855 to 1865, when box hives were used.

HOW DISTINGUISHED.

Foul brood as above is first discovered by finding a few cells in a hive, containing brood with sunken caps, and probably a small pin-hole near the center. Upon opening the cell the larva is found stretched out at full length, dead, of a dark brown color, dying from one to three days after being capped over, we should judge. If the larva has recently died it is in shape as perfect as the live larvæ are; but those alive are white, while those dead are of a light brown color at first, but soon change to a dark brown, and finally to nearly black. Upon touching a dead larva it is found to be a salvy mass, and the whole hive, if far advanced, emits a very disagreeable smell. The disease progresses, as a rule, very rapidly; and from a few cells in the spring it so spreads that by fall nine-tenths of the cells will be filled with dead larvæ, the smell of which is worse than carrion. Thus what should have constituted an increase died, and as none are removed from the cells, the bees grow less and less until all are gone, unless the apiarist comes to the rescue. We have been thus particular in describing the disease, so none can mistake it; and also because there is another disease similar, *called* foul brood, which is not foul brood. With this last-named, the caps to the cells have very much the same appearance as in the genuine, but the dead larva is of a grayish color, and instead of being stretched out at full length in the cell, it is drawn up in a more compact shape. After a time it so dries up that the bees remove it, and no harm seems to arise from it, only as there are a few larvæ that die here and there through the combs at different periods; sometimes never to appear again, and sometimes appearing with the next season; hence we hear persons saying, "My bees had a few cells of foul brood which I cut out, and all was prosperous again." All cutting out of cells with the genuine is of no avail, as the germs of the disease are in the honey. Also the dead larva never dries up so as to be removed entirely, although some strong stocks of Italians come very near doing so at the approach of cold weather in the fall, when but few cells are in the hive at that season of the year.

HOW CURED.

We have never experimented with acid, and from all accounts we should say it would be better, in this day of comb fdn., to use the old way,—melt the combs into wax, and give the bees fdn. The old way is this—the same we used to eradicate it from our apiary: when a swarm is believed to have the genuine foul brood, mark the hive, and if there are bees enough to ward off robbers, let it entirely alone for a month, when it should again be examined, and (if in the breeding season) the genuine will have progressed so you will be sure that it is foul brood, while the other may be all gone, or remain about the same. The genuine means progress every time, although in some cases a colony may hold out over two seasons. As soon as it is determined that the disease is foul brood, shake or drive the bees into a clean *empty* hive, and render the combs into wax, and boil the honey at once before you forget it. Don't set it away thinking you will do it some other time, for if you do you may repent at a great loss some future day when, through some mistake, it gets inside the hives again. Boiling such honey destroys the germs of foul brood, and makes it as good as ever for bees. If in time of plenty of honey, so there is no danger of robbing, drive or shake off three-fourths of the bees, and leave the remainder to care for the brood. In 21 days treat as at first given, and your disease is gone as far as that hive is concerned. After the bees have been in the clean hive long enough to have the larvæ hatch from the eggs laid in the new comb the bees have built, you can then give fdn., empty comb, or frames of brood, the same as with any healthy stock. Burn the frames, or throw them into a kettle of boiling water after the foul-brood combs have been removed, and scald thoroughly any thing that has the foul honey upon it, and set the hives away for one year, when they are as good as any, as far as our experience goes. Right here we wish to say the disease is in the honey; and if you let a robber get a load of this honey, or carry it on your fingers, knife, or any thing else, to a healthy hive, that hive is doomed. We have now told you how to cure one hive, so of course you know how to cure a hundred; and if we had a hundred hives we should go to work in just the way given, knowing we would succeed; but if we were satisfied we had only two or three hives in a yard of from 50 to 100, we should adopt the resolution of the N. E. B. K. Association, which was this: "*Resolved*, That this convention believes that foul brood is a very dangerous disease, and that we advise all to be careful in experimenting in regard to its cure. If but two or three colonies are afflicted in any apiary, destroy hives, combs, and all." We would do this for the reason that we should consider the risk of experimenting, or trying to cure the two or three, greater than the value of them. We are happy to announce that the disease has pretty much disappeared in New York State.

Borodino, N. Y., Feb. 16, 1881. G. M. DOOLITTLE.

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AN A B C SCHOLAR IN LOUISIANA.

ALLOW me the liberty of giving you my experience in bee culture for the last two years, as I have been in your A B C class for twelve months, and to ask what steps to take next. Two years ago I began to take quite a liking for bees. I had one swarm in an old box hive to start with; the first thing, I went in the woods to hunt for a few more during the summer. I found five and hived them in boxes of my own make; but I could not examine them, as they did not have frames in their boxes, so I rode over to see one of my neighbors who had six swarms in what he called Simplicity hives, and I was much pleased with them. They had glasses in them that enabled me to look at them without moving the bees. I made six exactly like his, and moved all mine into them by smoking, and breaking the old boxes to pieces. Being ignorant of the business, I lost all the young bees and comb. I was not aware that there was any such thing as transferring, which I have learned since. After all, they went to work, and in six weeks they had their hives full of comb and honey. I had them in a row 7 ft. apart, in nicely painted hives. On the 1st of September, 1879, we had a severe storm that blew them on the ground upside down, killing many of the bees and crushing the comb. I went to their assistance, placed them up again, and put them in a row behind a large tree, to protect them from the wind as much as possible, as it was blowing a perfect gale. Unfortunately, the tree blew down, and crushed the last hive and bees under ground, just as if Providence had ordered it done so. I did not do as Blasted Hopes did—leave for Kansas. I said, better luck next time, and concluded to get the A B C and learn as I went. In Jan., 1880, I bought 6 swarms for $15, and commenced again. They were all black. In April I made 4 artificial swarms, and they did well. What I wish to know is this: how many times can I make artificial swarms out of the same old swarms? Last year I made an artificial swarm out of one of my artificial swarms as late as the 5th of August, and they are doing well. I increased my number up to 22 strong colonies, for which I give your A B C *credit* and good luck together. M. A. GARRETT.

New Iberia, Iberia Parish, La., Feb. 15, 1881.

I can not well say how many times you can increase, friend G.; but as you have tried making a swarm from a swarm, I should think you would be pretty good authority in the matter. From your letter, I should opine that I could do a pretty large business increasing in your favored locality, even if the wind does blow sometimes. Why not set your hives right on the ground, then they can never fall down?

UNDER THE BOX-ELDERS.

THERE is nothing about our homes more restful, more pleasing to the eye, than a well-trimmed, well-kept lawn; and it is within the reach of almost every one who owns an acre of land and has a desire to make home pleasing and attractive. It is inexpensive, likewise, and, when once established, "it is a thing of beauty and a joy forever" to its possessor.

These thoughts passed through my mind as I opened the gate and stepped out upon the neat, shaven lawn of our old friend Duster, who, by the by, was swinging under his favorite box-elder trees, in his hammock, with one leg carelessly hanging over the side, while his lawn-mower, close at hand, told what had been his occupation. After the usual greeting, Mr. Duster at once introduced the subject of

WINTERING BEES IN CELLARS.

"I have been thinking of the matter since our last talk, and the different reports and different results by individuals of which we read, and have come to about this conclusion: that those who have reported wintering in cellars as a partial failure, the fault is in the cellar and not in the method. Any and every cellar will not do; and if the cellar is not clean, dry, and sweet, and likewise free from all frost, there will no doubt at times be partial failures. I have never lost a stock of bees in all these years that I have wintered in such a cellar, and I am sure of all my bees coming out in the spring alive and strong, as the spring season comes. Comply with the conditions, or, rather, requirements of their nature, and we are just as sure of wintering them as we are our sheep, calves, or any tender stock which we properly shelter and care for in our cold winters. I do not want to seem too persistent or dogmatic about this matter of cellar wintering; but I do want those to know who will take the pains, that there is but little risk in wintering bees in this way—that's all."

Now let me say right here, that I have been in Mr. Duster's cellar the coldest days of this cold winter; there was not a particle of frost or moisture in it; it was as dark as a dungeon; the bees were perfectly quiet, and the air seemed dry, warm, and pure. I could have sat down in it in comfort but for the darkness.

HONEY-DEW IN THE EAST.

"You ask me," said Mr. Duster, "what I know about honey-dew. I can recollect seeing it, when a boy, in Massachusetts; but it seemed different from any thing I have seen in the West. I found it there principally on the leaves of the shell-bark walnut—sometimes on chestnut. On the walnut leaves, at times it would be in quite large drops as late in the day as 1 o'clock P.M., and be so thick at that time the bees could not take it up. I never saw it there except in the fall of the year—say the last of August or first of September. Now, under this very tree where we are sitting I have seen it dropping in fine light-colored spray until the grass under the tree was quite sticky with the substance; and every morning for some hours the bees would be very busy gathering it from the leaves of the trees. The leaves seemed varnished with it; never saw it in drops as in the East. Usually it comes in May or June on these box-elders, and some seasons it comes two or three times, giving the bees quite a harvest. I always found aphides at such times, but I also found them, as well, at other times. I am inclined to think, in the case of these trees (if no others), that the weather and condition of the sap have a good deal to do with it. We tap the rock-maple; if the conditions are right, we get a flow of sweet sap. The aphides may be the tappers in this case, and at certain times the sap, being in a right state, hence the honey-dew. The veins of the leaves may burst, too, under certain conditions of the sap and weather; and I incline to think we get the dew from both causes.

"And now a word about the

BOX-ELDER.

"Its true name is ash-leaf maple. I think a good deal of it, and so do the bees. It blossoms quite early in the spring, and if the weather is favorable the bees will just cover the trees, gathering honey and pollen nearly all day. In the spring I have only to strike a narrow-bladed hatchet into the bark and the sap will flow abundantly. The bees soon find it, covering the body of the tree in their eagerness to obtain it. There has been but little said about it as a honey-producing tree, but I place it among the best. It is a handsome tree, either on the lawn or roadside. You can plant the seed like corn, and it will come up regularly, growing very rapidly, and soon making a beautiful tree.

"I told you," said Mr. Duster, "when you were here the last time, a little experience I had with a bad lot of hybrids. Well, this time it is another fellow—Zach Brown—'Old Zach,' as he is commonly called. One cold day last winter I found old Zach and two or three of his cronies in one of our stores hugging close to a hot stove, and telling yarns. Old Zach was just closing one about the way he could handle bees. Why, he could scoop 'em up in his hands, carry 'em in his hat, they'd never sting him—oh no! etc., etc.

"Well, last summer as I was returning from dinner to my business, I heard a most terrible din just ahead of me, and I soon found the cause was the swarming of some bees belonging to a young widow lady; and all her lady friends, some four or five women, were at it with every conceivable thing that would make a noise—and they made it! If I thought bees could be stopped and made to alight by this process, I would certainly hire a woman to manufacture the noise; such energy, such persistency—why, one of them asked me, after the bees had alighted, if she had not better keep an old sheet-iron or tin waiter she had, a rattling! I told her I thought it would do as much good *now* as *ever*. I meant to be a little sarcastic; but I'll be blamed if she didn't take me at my word, and at it again she went. Yes, give me a woman for a racket of *this* kind. The bees had alighted in the worst place possible—on the body of a small tree, among the thick small limbs, and about twelve feet high. I saw at once I was in a fix, being the only man present. Already I had caught the young widow's soft pleading eyes resting upon me; I knew their meaning as well as the next man. Who don't know the meaning of a widow's eyes, if she means it? and I saw she did. I looked at the widow, then looked at the bees; looked at the bees, then looked at the widow, and I might have looked a little foolish besides, between-times. But as good luck would have it, I just then thought of old Zach's story. So I told her that, as my business was *very* pressing, and not knowing, as well as some, how to hive bees, I would send a man who knew all about it. She looked her thanks, and I looked for Old Zach. I found him and one of his cronies on the street, and he was willing and ready to go. Crony and I went too. Business, with me, seemed different under the circumstances, you see. Old Zach, after looking at the situation of things, and taking two or three big pinches of snuff, concluded he would stand on a chair and hold the hive bottom-side up under the bees, while some one would shake the tree, and he would catch them, as he could just reach up to where they clustered. I had another pressure of business about that time, so I went a little way up the street, then crossed over to the other side, and down opposite the bees; got behind a big cottonwood-tree and—awaited events. Old Zach was already on the chair, with the hive nearly over his head and under the bees, and his crony friend had hold of the tree ready to shake. Old Zach gave the word, and down came the bees—about one-half in the hive, and the other half on Old Zach. He got down from his chair 'sort of spry,' and he really looked astonished! but whether it was the small quantity of bees he caught in the hive, or the large quantity that was in his hair and all over him, he gave me no time to ask; for up the street he went as fast as his legs could carry him, and with a good portion of the bees after him and on him. He tacked short at the first corner of the street he came to, as though he thought he could dodge them and throw them off the track. He soon disappeared behind some buildings and it was the last I saw of him for several days.

"Just then my attention was called to the demonstrations of his friend and crony. He was a man tall, lank, and lean, with a long neck, scraggy, bony shoulders, and hips the same, and his knees the size of small tea-kettles—all joints with a little bone between. Well he was balancing himself on the front-yard fence and holding on to the upper rail with his great bony hands, and as he see-sawed back and forth, his head nearly touched the ground in the yard, while his feet were high in the air over the side-walk; and as they came down upon the walk, he would give such a guffaw as would have astonished man or brute, while at the same time he kept talking between-times, as he could get breath, and I could hear something like this: 'Did you see them bees after Old Zach? haw, haw!—streaming out after him like a Chinee's pig-tail—haw, haw! He could scrape up bees in his hands—could carry 'em in his hat, eh? haw, haw! I seen 'em in his hair, and—' here he stopped suddenly his see-sawing and talk, slapped his lantern jaws first with one hand and then with the other. 'Bees!' was all he said, and away he went down the street, swinging his legs and arms in the air in all directions, looking like so many old-fashioned flails. He, too, suddenly disappeared around a street corner with all his unexpressed comments with him, and I'll venture to say he never did so much work in so short a time before in all his life."

Here I bade Mr. Duster a good-afternoon, and we parted. R. H. MELLEN.

Amboy-on-Inlet, Ill., Feb. 12, 1881.

I most heartily approve of your ideas about lawns, frind M., but really I can not say that I do about leaving the widow with her bees flying round in the air without anybody to put them in a hive for her. If she lost them, just tell your neighbor Duster that I think he ought to give her another out of his own fine apiary, and not a hybrid stock either.

FRIEND MILES' "WONDERFUL" SUCCESS WITH BEES.

A STORY WITH A MORAL, FOR THIS SEASON.

I HAVE never given you a report of my wonderful success in bee culture. I have kept bees three years, beginning with two swarms. I knew nothing about bees except that they would sting me every time they saw me, run as I might. But though I lived in constant fear of honey-bees, I did so love honey that I was persuaded to give a good cow for the two swarms, in early fruit-bloom. They were very small and weak, and had not a bit of honey. I knew this; but as plum-blossoms were coming out I supposed they were just going to scoop in the honey. So, with this sweet, comforting thought I went about my farm duties. There came on a long cold rainy time, with hardly a sunny day; it hindered my plowing a great deal. I kept that in mind, but I never thought of its keeping the bees from their work, who needed every hour much more than I, for they were living from hand to mouth. One day I felt a great longing for a taste of honey, so I took a plate and knife, bee-veil, and cotton rags, and went out to rob my pets. The first thing I saw of my bees were a great many dead ones about the entrance and on the bottom-board; my first exclamation was, "My bees are dead!" I lifted out the middle frame; a few bees were clustered on it, with just barely perceptible life, and not a particle of honey. The terrible truth at once flashed upon me, "My poor darlings are starving! Of course, bees can't gather honey in such cold wet weather! What a mean old fool I have been, that I did not think of this!" I ran to the house and got some sugar and hot water in a cup, and stirred it as I ran back; then I immediately began to sprinkle the bees and combs of both hives, as they were both in about the same state of dissolution. In a few minutes they were all buzzing with joy all over the hives. I should have been thrashed for neglecting those bees in that way, but there was nobody able to do it except myself, and I hadn't time. But I fed them from that time until warm weather, and in the course of the summer and fall they stored up honey enough to winter them. I left them out on summer stands, and they came through all right. I borrowed a bee-book of a neighbor—the first book I had ever seen on the subject. It was a Mitchell book. I was greatly interested, and learned how to manage my bees, raise queens, and divide. Of course, I thought Mitchell was the boss bee-man, and his hive the best hive; so I made several M. hives and divided my bees, making, in the course of the honey season, four new swarms, six in all. I wintered them in the cellar and fed them some. They came through to spring weather nicely; but after I set them out they dwindled and robbed each other badly; but I watched them and fed them, and finally got some honey to eat. Last spring I set out nine good swarms, but they dwindled down to five—not for want of honey or sugar syrup; I think it was robbing that used them up. I have now nine (five are Italians), once more buried in the snow, well packed in chaff hives, surrounded and covered over with hay, and over all is the snow, a foot or more. I don't know anything about how they are getting on; I have not seen nor heard any thing of them since November.

I have never sold a pound of honey. We can eat more than any apiary of bees can gather. I have 50 or 60 lbs. in the cellar, that I intend to feed back in the spring, or trade it for sugar to feed.

Pawnee City, Neb., Feb. 14, 1881. C. R. MILES.

THE HONEY-DEWS OF OREGON.

NOT ONLY HONEY-DEW, BUT CANDIED HONEY HANGING FROM THE TREES LIKE DEW.

I HOPE the following can be fully substantiated. I give you all the facts in my possession, and hope our readers from Oregon will do all they can to help us to get at the full truth of the matter. If there is really a locality where honey-dews come every season, for several months in the year, it were certainly well to have some of our bee men wake up and have this new El Dorado worked up and developed. I visited the Centennial, but must have missed the specimens alluded to. Does any one else remember of having seen them? Can anybody send me any of these specimens? Well, just read for yourself.

I clip this from the Willamette *Farmer*, published at Portland, Oregon, under date of Jan. 21, 1881. If there is any thing in the article which you can use in any way, do so; if not, throw it into the waste-basket. EUGENE SECOR.

Forest City, Ia., Feb., 1881.

During the summer and fall of 1875, while engaged in collecting, classifying, and arranging material for Oregon's Centennial exhibit at Philadelphia, in 1876, my personal investigation and letters of inquiry often brought me information of productions and the peculiarities of certain localities, that I under no other circumstances would have obtained.

By special request from the Botanical Department, to have the conifers of Oregon classified, and specimens on exhibition at the World's Fair in 1876, I visited several of the coast counties, as well as quite a number of localities along the snow-line of the Cascades, and among others a wild country east and south of what is known as the "Palmateer Settlement," and lying between the North Fork and the main Clackamas River. Here, I had been informed, I could find the "Abi Noblis," or "larch;" also the "Rhododendron" and the "Ceanothis Oderatis," or "Mountain Balm."

The most cordial hospitality was tendered me by all the frontier settlers I met, and abundant information and assistance freely given me to assist in increasing the importance of Oregon's exhibit.

Among other rarities on the table wherever I dined, I noticed an abundant supply of honey, in beautiful white combs, and of the most delicate flavor; and on inquiry was told that this belt of country, for several miles in width, and extending along the little valleys and foot-hills far into the Cascade Mountains, was subject at night to a fall of honey-dew during the months of June, July, and August, and not unfrequently the deposit is so abundant that in the morning it resembles hoar frost, and drops from the leaves and boughs of trees when the sun rises. The statements of all with whom I conversed on this subject were so direct that they should not have left the shadow of doubt in my mind of the fact; but on my return, in expressing a little incredulity at the house of Mr. Mills, on the amount that fell in that vicinity, "Oh yes!" said Mrs. Mills, "such is really the case; and I have some very fine specimens given me by my brother, who spends a great deal of his time hunting and prospecting in that part of the country."

With this she brought from her parlor several boughs of cedar covered with a thick coating of crystallized honey-dew, strongly resembling boughs that had been dipped in melted white sugar and then hung up and allowed to cool. Mrs. Mills kindly furnished me with a small package of these boughs carefully wrapped up in fine paper, which I took to the Centennial, where they were examined and commented upon by the thousands who daily thronged the Oregon Exhibit.

I have since ascertained that this honey-belt extends to the east side of the Cascades, but not so abundant as in this section of country I have already described. I also learn that it is no uncommon thing for bees in the Palmateer district to fill their hives, and then commence building and storing their honey on the outside, on any thing near the hive where they can hang their comb.

And now, Mr. Editor, might not some young man who is waiting for something to turn up, do well to post himself on bee-keeping and try the business of practical bee-husbandry; the expense would be small, and the experiment easily tried, and if properly conducted would doubtless prove as remunerative as it does in many parts of California. A. J. DUFUR.

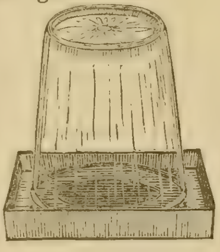
The editor of the *Farmer* adds:—

We have a word to add to Mr. Dufur's interesting communication. We remember that he told us of those facts at the time, and showed us the leaves, frosted with honey-dew. He also told us of seeing, in the same locality, honey-comb filled with honey, weighing 40 or 50 lbs. that the bees had made between rails in a standing fence. This illustrates the prodigal supply of honey in that region. Last summer we bought a box of rich honey of a farmer who must live within this honey-dew region. He assured us that it was much more delicious flavored than California honey, with which our market is well supplied, and we found his statement correct, for the honey was most excellent, and after it was gone the best of California comb honey went begging on our table.

Will friend Secor please accept thanks?

A FURTHER IMPROVEMENT ON THE HAINS FEEDER.

THE directions I have given for filling the Hains feeder, are, as you know, to immerse it in the syrup while held by one corner, as you may remember. Well, a great many do not like this way, and I recollect that one of our friends in Canada, who attempted to do this with thick honey, was not only disgusted with such a sticky way of doing things, but I do not know but that he came pretty near being disgusted with the whole race of Yankees, on account of their flimsy, dauby, and slip-shod way of doing things. It is true, he did not say all this, but I am a little afraid, from the way he wrote, that he came pretty near thinking it. If he didn't, I beg his pardon. You may remember what I have said about our grooved-board feeder being such a splendid way of feeding grape sugar, for all we had to do was to fill the jar with lumps, pour on some water, and then invert it. It all works handsomely, except the inverting part. In fact, this inverting part seems to be an objection to all of the atmospheric feeders. Well, a few days ago a gentleman who was visiting us was telling me of a feeder he used, but I had heard of and seen so many feeders, I fear I did not pay very much attention to it, thinking it would probably be too much machinery, like the greater part of them; but when he said he could fill and invert it without spilling a drop, I asked to see one. It seemed, when examined, but a common Hains feeder, and so I asked to see him fill it full of water, and then invert it without spilling any. Sure enough, he did it, and he explained to me that it gave the bees a larger feeding ground than the usual Hains feeder. Come to look into it, I found where the secret lay. After he had gone ($5.00 better off, for his invention) I made one after my own fancy, as per the figure below.



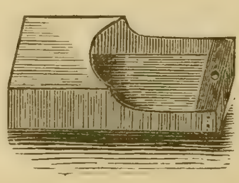
GLASS-TUMBLER FEEDER.

I simply got a honey-tumbler from the 5-cent counter, and asked the tinner to drive his 2-inch hollow punch through its tin cap. Then he made a little pan, 4 inches square, with sides ½ inch high; with a pair of tinner's snips and a soldering iron you can make them "like smoke," of a sheet of thin light tin. The tumbler cap was then placed in the bottom, raised on four bits of folded tin, and soldered fast. It was then filled with water, the cap with its square pan attachment placed over it, and, sure enough, it could be inverted very easily without spilling a drop. If you can't make them, we will make them for you for 10c each, $1.00 per dozen, or $7.00 per hundred. These hold a little more than half a pint; pint size, just double the money. As the glass is not mailable, we shall use a tin tumbler when ordered by mail. Postage on each will be 5c. What shall we call this feeder? To call it after the inventors' names it would be the "Hains, Finch and Crane, Root feeder." You see, my part of it was in thinking of making it out of tin-topped honey-tumblers. Messrs. Finch and Crane, of Strongsville, O., invented the idea of having it open, to put in the sugar, and invert without spilling. To cut it short, I have called it the glass-tumbler feeder. Put in some sugar, pour on some water, then put on the cover and turn it over, and tell the bees to come to supper. If you put it in the upper part of the hive, you can bid them come to dinner if you choose. It will also work with very thick honey or syrup; but a little water put in would perhaps make it work faster. No bee can ever get daubed or soiled by any possibility. Now, really, do you not think it is a handsome feeder for such a little bit of money? I should not wonder if it would please our English friends away across the water. I do not blame them one bit for wanting nice, strong, and substantial things. My wife is one of England's daughters, you see, and she has talked to me so much I begin sometimes to really think I may yet turn out "right smart."

◆

A NEW NAIL-BOX.

AS our lives are smoothed by little things, I will mention a convenience which I have never seen used but by myself, although perhaps everybody knows of it. I have had them in use many years. Square empty oyster-cans can almost always be procured in abundance. Now, take them and cut away one end and a part of one side, as seen in the picture; then take a strip of wood ⅞x⅞, long enough to go across the end inside. Bore a ⅝ hole through the center, and tack it in at the end thus:—



NORMAN CLARK'S NAIL-BOX.

and you have a tack or small nail box which, when laid down, is right to take nails from; and when not in use they may be hung on nails, in a row, one for each kind of nails, tacks, and screws, brads, etc. They will hold about 2 lbs. each.

Sterling, Ill, Jan. 25, 1881. NORMAN CLARK.

Many thanks, friend C. I would suggest that, after the boxes are nicely hung up in a row, we have a very plain and conspicuous label over each, that the boxes may all be put away in the same relative position, so that you can at any time lay your hand instantly on just the box you want. Under no circumstances permit nails of different kinds to be put in the same box, for it is more than they are worth to sort them out so they can be used conveniently. We have tried it here, and know just what it costs, especially with tacks and small wire nails; and yet every new hand will, if not watched, almost always put a handful of these small tacks or nails in some other nail-box than the one it belongs in.

ENEMIES OF BEES AMONG THE BIRDS.

THE PINE GROSBEAK.

I SEND a package by mail that contains the heads, and sample from the crops of a male and female bird that, during certain months, seem to prefer worker bees for a diet. S. W. SHERFEY.

La Mesilla, Dona Ana Co., New Mex., Jan. 18, 1881.

We forwarded the above to Prof. Cook, who replies as follows: —

The birds are grosbeaks, as denoted by their large bills; and, from the color and shape of the heads, they appear to be the Pine Grosbeak (*Pinicola Canadensis.*) The male of these birds have a head of brilliant carmine, and the female of brownish yellow.

The material from the stomach consisted of the remains of beetles, grass-hoppers, and bees. The sting, pollen-baskets, and jaws, were those of the worker bees.

The Pine Grosbeak, according to Cones, inhabits the northern parts of America, extending down south through the Sierra Nevada Mountains even to Mexico. It visits the northern United States in winter. We have them in our museum, taken in December in the pine forests of Michigan.

If this is the bird in question, it would seem curious that it should be injurious to bees, as it usually comes where bees are kept in winter, when bees fly very little, and it takes, probably from necessity, little food other than seeds. But it belongs to the Finch family, the birds of which live on either insects or seeds, according to circumstances.

It is now an accepted fact, that difference of habitat may change even the color of birds and other animals; and so it is not hard to believe that our Pine Grosbeak in New Mexico may live in the cool, congenial atmosphere of the mountains, and fly forth to the warmer plains for its food. Thus a new habitation may have changed the bird's habits.

Of course, there is a bare possibility that these birds are not the species I take them to be. It is impossible to decide positively with only the heads. If Mr. Sherfey will send the birds entire, I will pronounce with certainty as to the species.

A. J. COOK.

Ag. College, Lansing, Mich., Jan. 31, 1881.

BLASTED HOPES.

SOMETHING ABOUT THE CAUSE.

WE have one of the finest fields in the world for a subject in Blasted Hopes. More than one-half of the bees in this locality are dead, and I do not think one-third of the remainder will live till spring; yet I see nothing to discourage the intelligent bee-keeper. I have visited many bee-keepers in the last year, and have not found one that takes the journals and keeps up with the times, and manages his bees intelligently, that has not made a profit from his bees the past season. Nature is only doing what the apiarist has neglected, in pruning out the worthless bees. A good colony of bees will gather honey enough any season to winter them. We have got to be more careful in rearing our queens, and keep none but the best. There can be but one object in keeping bees, and that is for the honey they can gather. Queen-rearing may be profitable for a time, but that is far from being permanent. Before we make bee-keeping the success it should and doubtless will be, we have got to turn more attention to improving our stock of bees. This can not be done by the reckless management we now have in queen-rearing. Each bee-keeper must strive to improve his own stock. This should be done by breeding from the best stocks we have, and none other. We should work for the very best honey-gatherers. No intelligent bee-keeper will be long in discovering that some colonies are far superior to others. Let him breed from these, and when he finds he has a better kind, then take it for his queen-rearing. When he wants new blood, let him buy a queen of some one he knows to be a successful bee-keeper, even if he has to pay the price of an imported queen. Do not work for beauty in color: that should be no object. I have had far better luck with the dark-colored Italians than with the light. The best colony I have is of the dark color, and the third generation from the imported queen. I believe we can improve more from the home-bred than from the imported. I believe they are better after they become acclimated. I breed only for their honey-gathering and amiability. I can handle my best colonies without veil or smoke, and with no fear of being stung. I have not fed a pound of sugar or syrup in the last two years. My average for the past season was 23 lbs. comb honey, and I packed them for winter with 25 to 30 lbs. to the colony. I could have done far better than this by feeding; but I was putting them to the test of what they could do, and I can do better than this without feed. I would have no use for a colony that could not gather enough the poorest season to winter on. I have never lost a colony of bees in wintering.

Fairland, Ind., Jan. 22, 1881. L. R. JACKSON.

HOW AN A B C SCHOLAR STOPS ROBBING, ETC.

THE A B C came to hand Saturday, and I came nearly staying up all night reading it. I would undoubtedly have become oblivious to every thing had not my "better half" admonished me that it was Sabbath morning. Well, it is just splendid, and I can't help expressing my satisfaction to you. I am a beginner in bee-keeping, and I can appreciate such a help as your A B C is. I have 5 colonies, and I do not expect to keep more than that number, as my time to attend to them is very limited, as I am foreman in a manufacturing establishment in town. I have read that portion of your A B C relating to "robbing," and I will give my experience in that line.

Last year I had a very strong colony of blacks in an American hive. The queen was clipped. On a Saturday, in the early part of June, they swarmed. I moved the old hive away and put another American hive in its place, filled with Dunham fdn. The bees had clustered on an apple-tree not far off. As soon as I laid the queen-cage containing the queen on the alighting-board, they came back. I released the queen, and all was right. Previous to swarming they had stored considerable honey in top box. In the evening I took the box off, took out about 10 lbs. of honey (there was considerable honey left), and put the box on the new stand. The next day as I came home from church, I noticed an uncommon number of bees flying in and out of that hive. I knew there was something wrong, but did not know what it was. After mature deliberation, I concluded that some of my neighbor's bees were robbing the honey left in the top box. I was sure they were not my other bees, because they were Italians and the robbers were black. I closed the entrance, but that would not do, for it was very warm. Finally I took off the top box, turned it upside-down, and smoked the bees out (it was literally full of bees), and took the box in the house. By this time it was evening, and the robbers went home. In the morning they returned in great numbers. I was afraid they would kill the queen, and so I opened the entrance full length, took some grass and weeds, and laid it before the entrance, so that my bees had plenty of air, but could not get out, and the robbers could not get in, though they would try hard to get through the grass. By this time the robbers were literally swarming around the hive. I took an old wash-basin that had many little holes in it, and fixed it above the entrance, and filled it with water, which caused a continuous shower on the grass before the entrance. This settled them. They tried the other hives, but my Italians slaughtered them unmercifully, and that was the end of it. Please tell me if I have done any thing which you would not have done. Please accept my sincere thanks for your A B C book, and I will try to remain your very obedient scholar. F. C. GASTINGER.

Kenton, Ohio, Jan. 31, 1881.

If the bees were gathering honey at the time, I should hardly have supposed robbers would have found their way into the honey-box, under the circumstances; but as they were blacks, it is quite likely the Italians were getting honey while the blacks were robbing. You managed as well, perhaps, as any one would have done under the circumstances.

HOW AN A B C SCHOLAR SUCCEEDS IN CALIFORNIA.

IT will be remembered that friend Bridges, who writes the following, is the unfortunate brother who lost his house and children by fire, as mentioned in our December No.

Friend Root:—According to promise, I will give you a report of my success with bees, honey, etc., the past season. But had I made it out last fall before that sad accident which took away my children, I should have done so with far more enthusiasm than I can now. I believe I have never told you that I was only an A B C scholar—that the past season is all the experience I ever had with bees. Previous to buying my bees, one year ago, I knew nothing whatever about bees. I did not know a queen or a drone; I never saw a swarm of bees hived until I hived them myself in my apiary; I never saw any bees transferred until I transferred my own; I never read any thing on bee culture until I subscribed for GLEANINGS last March, and got it just before my bees commenced swarming. I did not have anybody with me that knew any more about bees than myself. So you may guess there were many times during the season when I had to use my wits to the very best advantage. Although a journal and a work on bee culture are *indispensable* articles, yet I believe if one were to take a whole catalogue of books and journals he would still need a good deal of what might, in homely English, be termed "gumption," if he aspires to successful bee culture.

I bought my bees from forty to fifty miles away from home, and after deducting out the "stealings," and what died out and were robbed out for want of care. I hauled them safely home during the winter and spring months. I got through the spring with 100 stands, many of them very weak and in poor condition. About forty of them were in old boxes and barrels, which I transferred all right, though some of them I didn't get transferred until they had swarmed two or three times, which left the old swarms very weak. I increased by natural swarming to 160 stands; but if I had allowed them to swarm less, and doubled up a good many of the weaker ones, I should have made more honey. A great many of the old stands didn't have the lower box half full of combs, and but little honey to start with in the spring. I had no combs at all, nor fdn. for *any* of the top boxes, nor any for *new* swarms; and so you see they all had a late start for making honey. A great many of them I did not put top boxes on till the honey season was half over, and many more until nearly over; and about 20 stands did not get built up soon enough to store *any* honey in top boxes, though I got combs enough built out by using some strategy to supply the whole 160 stands with top boxes filled with combs. I extracted, during the season, 150 cases honey, each case containing two 60-lb. cans. You will see, by figuring up, I had nine tons of honey. I did think I would extract again in October; but the honey (goldenrod) was dark and poor, so I left it in the top boxes; some of them were about full, and are *now*. I probably left, in top boxes, 1500 or 2000 lbs. for spring feed. I had tried out 125 lbs. of the whitest wax I ever saw that was not bleached; but it was destroyed by the fire. I intended to make me a machine *a la Faris*, and make all the comb foundation I should need for next season; but my bees will have to do it themselves again, as I have but a few pounds of wax left. I must tell you

HOW OUR BEES SPENT THEIR CHRISTMAS.

We had just had about two weeks wet, rainy weather in December, when one day the sun came out for an hour or two. I went to the apiary, and the bees were carrying in yellow pollen, while before the rain they had got nothing but a little white pollen. I could not think where it came from, as there were no new flowers out. The next day was Christmas; it came off warm and pleasant, and the bees were working as in May weather. I stood before one hive, with watch in my hand, and actually counted 24 bees, heavily laden with pollen, enter in one minute, besides many were bringing in honey; and this all came from *desert sage*—a plant I had supposed worthless, as old bee-men have told me that bees never work on it. CHAS. BRIDGES.

San Fernando, Los Angeles Co., Cal., Jan. 27, 1881.

You are right, friend B. "Gumption" is exactly the word; and it is just what is wanted. Not a few of us know, by experience how you must have got around to have accomplished so much in your first year's work. Ever since we got that honey from friend Wilkin, I wonder, every time I hear a report from California, if the tons of honey secured are all like his. If it is, well may it have a world-wide reputation. Perhaps the plant you mention has never yielded honey or pollen before, so as to be noticed. Every season seems to bring to view some feature in bee botany never noticed before.

RAMBLE NO. 3.

KINGSBURY AND BUCKWHEAT, ETC.

SHOULD you stand in our apiary and look away to the west, your vision would be interrupted by a range of mountains, blue and hazy with the intervening twenty miles. Could we look over this barrier and to the northward, our sight would descend upon the famous Adirondac Park, of northern New York, with its rugged mountains, beautiful lakes, and spruce and cedar scented forests. Starting from our home, with these mountains in view, we pass the boundaries of our town and enter the township of Kingsbury. The greater portion of this town is quite level, and was formerly designated as Pitch Pine Plains. The Hudson River is its western boundary, and in olden times it was the thoroughfare of contending armies. Heroes of the Revolution, and previous wars, here faced death, and it may be truly said, that these ancient roads were tracked with blood.

The principal village in this township is Sandy Hill, and it takes its name from the nature of the soil. One of the principal crops of this township is buckwheat; and if some of our friends who are skeptical in relation to the secretion of honey in this plant would come to this place, where a large area is annually sown, they would find more or less honey gathered from it every year. In our own locality, only twelve miles distant, but a few acres of buckwheat are sown. Our bees probably find from ten to twenty acres to forage upon, and we could put the yield down as a failure, as we seldom get more than a taste of buckwheat honey, while our neighbors in Kingsbury are reveling in its production, and the hives are becoming filled from top to bottom, and we have seriously thought of carting over about fifty swarms and setting them down in the midst of these hundreds of acres of snow-white blossoms. And here is another point for those who believe bees fly a score or two of miles for honey. These fields are perhaps ten miles in an air-line from us, and we can testify that our bees do not collect honey at that range. We think five miles a good working distance.

Mr. Seth Devine is the most extensive bee-keeper at present in Kingsbury, having over 100 swarms; but owing to light yields of honey and low prices, and other business on his hands, he does not give much attention to his bees. I believe at swarming time he tells his neighbors to bring on their hives if they want a present of a swarm of bees.

In the pleasant village of Sandy Hill we find several bee-keepers. Mr. Horace Harris has a small but fine apiary of black bees. He is enthusiastic over his pets, but thinks he will be compelled to sell out his entire stock on account of the effects of stings upon his wife and children. The effect is of such a nature that death would result if remedies were not at hand to counteract the poison. Mr. Thomas, of the same place, has been compelled to give up keeping bees on this account. Having been stung upon the ear he was rendered insensible; and but for immediate medical assistance would have died.

Mr. Harris claims that his bees use much more water while at work upon buckwheat than at any other time during the season. The pools around his well are thronged with them.

Mrs. David Hall is another bee-keeper with a growing apiary, left her by her husband, who died suddenly several months ago. She heroically takes her husband's place, and is quite skillful in their management.

Mr. Ira Brayton is another patron of GLEANINGS. His apiary is in charge of his son, who is so unfortunate as to be deaf. He can not interpret the language of the bee from the contented or angry hum of its wings; but his eye is quick to discern the movements of his winged stock, and thus their moods are understood. We wish this young man success, and not only the ability but the opportunity to manage a large apiary.

There are several other bee-keepers in Kingsbury whose homes we have not visited, but know that warm hearts are ready to entertain us the same as we have been by others of the fraternity. Success to the bee-keepers of Kingsbury!

Near Sandy Hill are located the grounds occupied by our county agricultural society, of which we told you in Ramble No. 1. We paid them for the privilege of selling honey and other bee-keeping articles, and could have done a good business if the location agreed upon had been given me. We were so disgusted with our treatment that it is doubtful if we ever exhibit any thing in the bee line at a county fair again. It don't pay. J. H. MARTIN.

Hartford, N. Y., Feb. 1, 1881.

Friend M., if the managers of your county fair sold you a location, fairly and squarely, and then gave it to another party who offered more, they should be "straightened up," and if you will give me their address, I will try to do it if no one else will. I am *sure* it is a misunderstanding.—Thanks for your report on the buckwheat district of York State.

REPORT FOR 1880.

17,000 LBS. OF HONEY FROM 250 COLONIES.

I HAVE heretofore refrained from writing any thing for the bee papers until I got sufficiently posted so I would not have to take back any thing I might write; but after an experience of 25 years, I begin to fear I shall never learn it all, and may as well, therefore, contribute my share of experience to the general fund.

I commenced the spring of 1880 with 250 swarms—80 of them black, the rest Italian and hybrid; they were divided as follows: 6 miles west I owned a half-interest in 80 black swarms; 6 miles northwest, a half-interest in 30 black swarms. These two lots were watched and hived by the parties where they were located, they owning a half-interest in them. The rest of the 250, viz., 180, were mostly Italian and hybrids, and divided into 4 lots—40 at home, 24 two miles north, 41 three miles southwest, and 90 five miles south. The home lot was divided for swarms; the rest we ran for extracting, and depended on keeping the swarms from absconding by keeping all old queens cropped, and giving plenty of room; and where they showed a persistent determination to swarm, we gave them two hives of comb, which generally kept them, and gave a better yield of honey than where only one super was used.

Probably our entire loss from swarms leaving would not exceed 10, which is not so bad when we consider the number, and that there was no one to regularly watch four of the lots more than to tell us which had swarmed and gone back during our absence, if they happened to see them.

As soon as weather would permit in spring, we commenced to spread the brood in the stronger, and give brood to the lighter; and from the middle of April to the middle of May they seemed to do well; but the cold and wet weather then commenced, when they went down hill instead of up; and before they could live again, we had to feed 600 or 700 lbs. of honey.

We did not lose any swarms entirely by starvation, but I have no doubt that more feed would have paid good interest on the investment.

White clover was a failure, having, like the winter wheat, mostly winter-killed. We got 2 bbls. of honey before basswood, which was largely sumac. Basswood bloomed heavily, and we were in hopes of a large yield from this source; but when I tell you that we had rain on 7 days of the 16 that basswood was in bloom, bee-keepers will see that it was not the most propitious for a big yield; and yet, by having over 200 swarms ready with the second stories on, ready for every drop, and giving them prompt attention, we succeeded in securing 12,000 lbs. of basswood and 5000 lbs. of buckwheat and fall flowers mixed. The basswood was fair for quality; the late was very thick, and good quality for late honey. We had far too much rain for a good yield; still, for this year of failure, I am well satisfied with the result.

It took a good deal of figuring, and I might add traveling, too, for the seventeen thousand pounds, having the bees in six places.

If 200 to 400 stocks will do well in one place, as some contend, I traveled much more than was necessary. There may be places where 200 to 300 colonies may thrive; but my opinion is, that 100 or less will do better, and give better returns than a larger number.

I have 23 swarms that I have moved twice this winter; the first time, Nov. 15th, moved them 5 miles, and put them in a neighbor's cellar; and Jan. 18th I moved them home into my cellar.

If this lot does extra well, so that I am satisfied that winter moving is what they need, I will report in the spring. I will add, that my increase was 100; I therefore went into the winter with 350, 35 packed in straw and chaff, out of doors; the rest in cellars.

We have had a very steady, cold winter, from zero all the way down to 38° below.

Bees are wintering only moderately well. I have swept up about 3 pecks around 90 swarms, so far, in one cellar; I can not tell as to those outside as yet.

Ithaca, Wis., Feb. 1, 1881. S. I. FREEBORN.

STRAY THOUGHTS FROM ORCHARD APIARY.

NO. 2.

FEEDING BACK EXTRACTED HONEY.

OF course, bee-keepers should endeavor by every means in their power, to increase the demand for extracted honey at a fair price; but when it falls below that, it must be worked off in some other way. Even if we run for comb honey, there will always be more or less extracted on hand at the end of the season, from unfinished combs and hives that were not strong enough to work in boxes. At the present market prices, in localities where there is but little home demand for extracted, I think it will pay the apiarist to feed it back and let the bees put it into combs. I never had very good success in feeding back until last year, when I adopted a new plan with very good success. I selected one of my strongest, heaviest hives, and took out all the brood except one frame of larvæ, nearly ready to seal, and changed them for frames of solid honey from other hives. A colony prepared in this manner will be obliged to put all the honey they get into the boxes, and will not waste any in unnecessary breeding. I then selected the best of my unfinished boxes, and tiered up according to the strength of the stock, giving all the bees a chance to work. I fed from a closed feeder on the outside of the hive, as fast as the bees would take it, keeping honey in the feeder night and day. As fast as the sections were filled I removed them, putting others in their place until all were finished, when I removed them and changed the combs in the hive back to the hives I took them from. I then gave the stock brood enough to make up for what they had lost while I was feeding them, so that they lost nothing by being fed. Now for the result: Counting the weight of the sections before they were put back, in with the extracted, I found that it took 155 lbs. extracted honey to make 100 lbs. of comb. As I sold my comb honey for 20c per lb., and as extracted sold slow at 9 and 10c, I think it has paid me to feed back.

I advise bee-keepers who are not sure of a home market, to try feeding back by the above method. I feel sure you will be well satisfied with the result.

E. A. THOMAS.

Colerain, Franklin Co., Mass., Feb. 1, 1881.

Thanks, friend T.; but I am sure the greater part of that 155 lbs. was put in other combs than the sections—in the hive somewhere; for in making a similar experiment, while the whole hive, feeder and all, was on scales, there was scarcely any decrease in weight while the honey was being taken from the feeders and sealed up, in the unfinished sections. Even after you have a hive filled with combs of sealed honey, they will manage to stow away a great deal in the different corners and crannies of the hive.

CANDY FOR DYSENTERY, ETC.

ALSO SOMETHING ABOUT "LONG NOSES."

IN Jan. No. GLEANINGS you ask for reports on "candy for dysentery." I have 10 swarms out of doors, and 5 in the cellar; 2 outside are not packed, one of which (a very strong swarm of hybrids) became uneasy at Christmas and kept up a loud buzzing until the middle of January, when they showed signs of dysentery—flying out and spotting the hive, and blocking up the entrance with dead bees. I thought of giving them candy; and when I read your advice in GLEANINGS I was determined to do so. After making the candy I went to the hive, shoveled away the snow, took out the chaff in the upper story, and lifted the quilt a little; but the bees were bound to come out and fly away, and so I got the smoker and loaded it with rags; but the smoke seemed to have no effect on them. Come out they would; but I put the candy in, at all events, but lost quite a small swarm of bees. After closing the hive, I cleaned the entrance again; when, happening to get my nose (which is a rather long one) near the entrance, I noticed that an awful stench came out with the air from the hive. To tell you that I was astonished will not express it. I was electrified, and so excited that I trembled all over.

It was an awful smell. It being a hive of your make, I lifted it up and found about an inch of dead bees on the bottom-board, all putrid and stinking. No wonder the poor little things wanted to get out; and no wonder they got the dysentery. After cleaning off the bottom-board I put the hive back, and in two hours they were as quiet as ever bees were, and are so yet—no more signs of dysentery. I have treated those in the cellar the same way, with the same success. As I have had a good deal of experience in making and feeding candy, I would like to tell you about candy and brood-rearing and moisture in the bee-hive. You have suggested taking away their combs, and giving them new. I do not think it necessary, as the bees will not eat poor stores if they have good candy.

Now, Mr. Root, I want to thank you for teaching me to use a Simplicity hive with a loose bottom. I thank you with all my heart. W. W. WILSON.

P. S.—Do not publish this, as I have studied bees far more than grammar. W. W. W.

Hartland, Waukesha Co., Wis., Feb. 4, 1881.

You see, friend W., that notwithstanding your plain and explicit P. S., I have gone and flatly disobeyed you, by publishing your letter. My only excuse is, that it is not good grammar we want, so much as practical facts from real working bee-men.—I agree with you, that your bees needed to have their hives cleaned out, much more than they needed candy; but why, let me ask you, did they get into such a state of affairs? How did an inch of dead bees come on the bottom board? It is my impression that, had they been given a chaff hive instead of the unprotected Simplicity, these bees might have been alive and on the combs. By all means clean out the hives, whenever there are dead bees enough to make them smell badly. Do not complain of having a long nose, friend W. It served you well then, and doubtless has done the same many a time before. You see I know, for I am somewhat so myself. Let us continue to keep our noses poking about the entrances.

DOOLITTLE'S REVIEW AND COMMENTS ON THE A B C BOOK.

Continued from last month.

EXTRACTED HONEY.

DOOLITTLE'S ARTIFICIAL HONEY.

Take and make a syrup of A sugar, of the consistency of honey; then for every 5 lbs. of this syrup, put in 3 lbs. of clover or basswood honey, and thoroughly mix, and there is not one in twenty but will prefer it to clear honey, and not one in ten that can detect it by the taste.

RIPENING EXTRACTED HONEY.

I am just one of those persons who have proven to their entire satisfaction, that there is no difference between honey extracted before it is sealed and ripened in an open cask or can in a warm room, and that sealed by the bees, and ripened in the hive.

EXTRACTING UNRIPE HONEY.

I think your honey, when first gathered, must be very poor stuff, or else you are carrying this thing too far. We have tiered up hives, as you tell, and left till October; then used in the comb, and extracted it by warming the combs so we could, and for the life of me I could see no difference between this and some I warmed that was taken before it was sealed. Both were so thick you could turn a saucer over, as you tell, and not have it run out, and so clear you could read through it six inches deep. Just tell your readers to extract when they will, but ripen in open cans in a warm room.

DADANT'S HONEY-PAILS.

Candied honey in Dadant's pails is selling well in all the markets we have tried, and it is by far the nicest way to put it up.

Don't say tin cans are "next best," but say, *the* way to keep honey is in tin cans holding 300 lbs., in a warm dry room, with a cover made of your duck cloth. If you want to sell it in that shape, fill the Dadant pails just before it ceases to run, and set them away.

HIVE-MAKING.

THE 1-LB. SECTION BOX.

Would it not have been well to have told your readers that Manum, of Bristol, Vt., made a section that was nicer than any thing could be that was planed, and that, too, with nothing but a saw, and that it held 1¾lbs.? that Betsinger made prize boxes that were very nice that held 2¼ lbs. glassed? that Hetherington, the largest bee-keeper in the world, used a box still different that Thorn & Co., and Thurber & Co. pronounced the best for New York market of any thing there was used? How should I know of any thing but 1-pound boxes if I did not read it elsewhere outside of this book? Many can not afford to buy several books, and so want to be posted by reading one.

I have described but the one section, for the same reason I have described but one hive. I do not wish to confuse my reader and leave him in a broad sea of uncertainty as to what style he had best adopt. Should he choose the hive I have described, and then try to use some of the other forms of sections, without experience, he would be likely to have the same troubles so many of us have gone through with in patching up and trying to make system out of chaos. Harbison produces more comb honey than any you have mentioned, and he uses still another box; but I have not described it. I have once given a letter from Thurber, saying the 1-lb. section sold the best of any in the market; but he may have given different opinions at other times. Hundreds who had no knowledge of bee culture at all, have, by following the plain and direct teachings of the A B C, succeeded at once, rejoicing at every step; but had I taken in all these other points (and I grant they are important), I can have no idea that such would have been the case. As it is, every implement, box, frame, and tool, fits exactly with all there is in the book. Had I described and advised the things used by others (even though they are better, mind you), such could not have been the case.

HONEY-COMB.

BEES PACKING IN THE COMB COMPACTLY.

Betsinger says that the bees never pack themselves in the cells except in cases of starvation. I am not posted, so can not say from my own experience.

As I have often pulled combs apart in winter, and found them thus, I can not quite agree with friend B.

IS IT THE RESULT OF AGES OF SURVIVAL OF THE FITTEST?

Now, really, friend Root, do you think bees build comb any differently than they did when the great Creator pronounced all his works good? That there is a difference in the qualities of bees, I know; and so I believe there was then. If God knows the beginning from the end, he knows just what is wanted, and so makes it good. We have no reason to believe that there has been much improvement made, as a whole, since the creation, if any thing; for wherein one point is gained, another is lost; for instance, man has perhaps a better intellect to-day than he had 3000 years ago, but he does not live a tenth part as long. So with our choice breeds of cattle, sheep, etc.; the more choice they are, the more petting it takes to keep them up, while the lean, uncouth "scalawag" will live and thrive anywhere.

MAKING BEES USE LARGER CELLS.

We tried to so improve the bee as to make them take cells 4½ to the inch, but we had to give it up, and believe God knew best when he taught them that five is right.

HYBRIDS.

WHY DO HYBRID QUEENS BRING ONLY ¼ PRICE OF ITALIANS?

Just because anybody and everybody can raise plenty of hybrids themselves, if they have an Italian to start with; but if they have a queen producing hybrid workers, they soon have nothing but blacks.

BLACKS ARE MORE TROUBLESOME ROBBERS THAN EITHER HYBRIDS OR ITALIANS.

You are just right here; and still we have those who claim the Italian is superior to the blacks, only as they rob others. I have been so annoyed by these black chaps following me around, as to get fairly nervous.

I have had pure Italians that were ordinarily quiet and peaceable get so roused up as to sting worse than any hybrid ever thought of stinging.

INTRODUCING QUEENS.

FINDING THE OLD QUEEN.

I would say, draw one of the outside brood combs, for the queen is oftener found on the outside brood combs during the day than she is on the central one.

THE "PEET-CAGE" PLAN OF INTRODUCING.

I have succeeded to my entire satisfaction the past summer in introducing queens by making a cage as you used to, to cage queen-cells; and make it so it is 4 inches square; find a place where the bees are hatching out rapidly, and place your queen thereon, after getting all the bees off; then place your cage over the queen, and press into the comb. Of course, you must have some cells of honey inside the cage too. As the bees hatch, they become attached to the queen, and she commences to lay in the vacant cells, and in from 24 to 48 hours she will fill them all, and these young bees will protect her after you have lifted the cage off from her and them.

ITALIAN BEES.

IS FRESHLY IMPORTED STOCK BETTER AS HONEY-GATHERERS?

Can't "swallow" that yet; and I candidly believe further importation is useless for the next five years.

THE FOURTH YELLOW BAND.

I have had those on which the fourth was just as visible on the honey-scale as it usually is on the third, and that while they were on the window.

LAMP NURSERIES.

Are not your queens weak and feeble if hatched in the lamp nursery? Mine were so much so that, after using it two years, I laid it to one side, and have not used it since. Queens hatching over a swarm of bees in a wire-cloth cage seem to be as strong again.

LETTING NEWLY HATCHED QUEENS INTO A HIVE WHEN A LAYING ONE HAS JUST BEEN TAKEN OUT.

Out of 20 so let in the past season, I lost all but one, and had nearly as bad success before; so I should say, if I were writing a book, that, as a rule, all so let in would be killed.

UNSEALED HONEY GETTING THICK IN THE LAMP NURSERY.

A good argument in favor of my theory in ripening extracted honey, and also of keeping box honey till it is so thick it will not leak from unsealed cells. We have faith enough to believe that, if you were to once store your box honey in a room that maintains a temperature of 90° for three weeks, you would never ship it as it came from the hives.

MOTHERWORT AS A HONEY-PLANT.

As I said at the Chicago convention, so I say now: if I were to cultivate any plant for honey, it would be Motherwort; for our bees work on it from morning till night for weeks.

MOVING BEES.

HOW FAR DO BEES FLY FOR STORES?

You know we don't agree here, as I claim they go from 3 to 6 miles from choice. My bees went 4 to 5 miles to work on teasel the past year, without any teasels within 3½ miles on the first part of the route. This I know, as a bee working on teasel is always partly covered with a whitish dust, as they are with yellow when working on pumpkin and squash.

Thanks; very likely I have put the distance too small.

NUCLEUS.

HOW FEW BEES, WITH A QUEEN, MAY START A COLONY.

We once had a colony become so reduced that, by actual count, there were 81 bees and the queen, and so they held on till warm weather, when they built up without help, and actually gave a surplus of 5 lbs. on buckwheat, in sections, and were in splendid condition for winter.

IS THE GALLUP FRAME TOO DEEP?

I don't see how you can call the Gallup frame deep, when it is only two inches deeper than the L. frame. If you had said the old American or Kidder that were 14 inches, I could have agreed. The Gallup frame is the best proportioned frame of any, all things considered. So think I.

DOES THE BOTTOM PROJECT BELOW THE CLUSTER?

No more than the ends do, for it is exactly square. A good swarm of bees in the Gallup frame will touch the bottom and top of the hive, and also each end where only 9 frames are used, but not the sides; while with the L. frame they touch the bottom and top only.

Why, friend D., it seems to me our bees don't act just as yours do, but perhaps we are both a little prejudiced.

[To be Continued.]

CELLAR WINTERING.

BY MR. GEORGE GRIMM (SON OF ADAM GRIMM)

MR. EDITOR:—You wish me to state how I winter my bees in cellars. Well, here is the statement. I do not claim that mine is the *best* mode, but I have been sufficiently successful to give *me* satisfaction. It was, with few modifications, my father's plan, and mostly the result of his experience. The three main requisites with me are, strong colonies, plenty of good ripe honey, and a cellar that the frost can not penetrate. As soon as the summer honey season is over, I begin to prepare my bees for winter. The fall honey crop is a thing rarely known here, and I am generally well satisfied if my bees obtain enough from buckwheat to supply them with their winter stores. If there are fields of buckwheat in the neighborhood, I extract most of the white honey from the combs, and let them fill up on buckwheat honey. If the yield is good, they will breed fast; and by the time the storeroom is filled, there will be brood in abundance. It is desirable, and in my opinion necessary, that all this brood should hatch, and the young bees fly out before they are removed to the cellar. But buckwheat does not always yield honey, and it then becomes necessary to feed early and abundantly to induce the bees to breed, and quit in time to allow all the brood to hatch before it is too cold. Nothing but the best ripe honey or white sugar syrup should ever be fed in the fall. I never put my bees in the cellar before I am compelled to. I am always considerably later than my neighbor bee-keepers; but I am always considerably later, too, in taking them out in the spring. My theory is this, and my practice has verified it, that bees can not well stand more than a certain length of confinement, and that they can stand a little cold in the fall of the year, when young and healthy, better than in the spring, when old and weak from long confinement. Of late, my bees are never taken out for a temporary fly, and I have very little trouble from spring dwindling, except in exceptional years. In removing them to the cellar I have often delayed so long that I was compelled to brush the snow from the hives. It is not necessary to have them perfectly dry, or the cellar either, when both are properly ventilated. I have wintered with splendid success in a cellar where the water was nearly two feet high for several weeks, and all but entered the hives. Had I not anticipated it, and raised it from near the ground, the lower rows would have been drowned out.

I will now describe my best cellar. It is about 22 x 40, 8 feet high, dug into the side of a hill, the floor being level with the ground at the front end. The sides are well banked up, and the whole is covered with a building used for storing the supplies of the apiary. A space of about ten feet of the front is partitioned off, and is used for storing vinegar. The rear is used for wintering bees. The bottom is hard gravel; the ceiling and walls are plastered. In the center of the partition is a chimney with a ventilating flue for the bee-cellar. In each of the rear corners is a three-inch pipe, one reaching to the floor, the other only through the ceiling. These two tubes enter the storeroom above, while the chimney reaches the outer air. The bees are placed in rows on 2 x 4 scantling, the rear of the hive being about one inch higher than the front. They are placed one on top the other, six high. The ventilation of each hive is simple; the entrance is opened full size, and the honey-board slid forward so as to allow an opening of about 3-16 of an inch at the rear. This allows of a draft through the whole hive. I am never troubled with moldy combs. If the temperature is too high, I open the door communicating with the front part of the cellar, and let in the cool air. If it is too cold, I put a stove in the front part and heat the room, then slightly open the door to the bee-cellar. Thus I aim to keep the temperature at about 42°. In the cold weather it is easy to keep them sufficiently warm; but in warm weather I can not always keep them cool enough. I have been thinking of connecting the front room with an ice-house, as so much depends on keeping the temperature even throughout the winter. I have wintered as many as 350 colonies in this one cellar, and wintered them well. My loss has never exceeded five per cent. I expect to winter successfully, even this severe winter, although I fed very late, and my bees were not over-strong. They are at present very quiet, and show no sign of disease. The dead bees on the bottom are not nearly so numerous as I have seen them at this time in other years. Another thing I consider of importance, not alone to winter safely, but to prevent inordinate dwindling in the spring; and that is, never to let bees start breeding in the cellar, unless the season is far enough advanced to admit of taking them out of doors soon. Breeding in the spring is only then profitable when it can be carried on without interruption. By keeping the temperature moderately low, breeding in the cellar will be prevented; and by keeping the bees in the cellar as long as possible, when taken out they can breed uninterruptedly. The addition of an ice-house to my cellar I believe would accomplish this.

Jefferson, Wis., Feb. 8, 1881. GEO. GRIMM.

Perhaps some may think this valuable article should have been given sooner; but I presume that, with the experience we have had, we are, many of us, prepared to read it understandingly, and we can easily turn back to it when we are ready to begin making preparations for another winter's campaign. That so many of the old veterans who number their colonies by the hundreds, adhere to cellar wintering is a rather significant fact.

THE NORTH-EASTERN BEE-KEEPERS' ASSOCIATION.

THIS session seems to have been one of unusual interest and harmony. Some thoughtful friend has been so kind as to send me the report in the Utica *Morning Herald*, from which I clip as follows:—

WINTERING.

Mr. Doolittle said winters vary, therefore he thought it good policy to winter in the cellar and out of doors in equal proportion. A winter favorable for wintering out-doors is not favorable to wintering in the cellar, and *vice versa*. One winter he had 90 swarms under heavy snow, in places 11 feet deep. Out of these 90 swarms he wintered but 15. The same year he put 60 swarms in the cellar, and saved 55 of them. He had a cellar with an even temperature of 44 degrees. The bees do not get restless at this temperature. Last winter he had better success in wintering out-doors than in-doors, although those kept in-doors did pretty well.

Mr. House said his experience was precisely like that of Mr. Doolittle in regard to wintering under the snow.

Mr. Doolittle said he had kept bees in a cave, distant from the outer air no less than three feet at any point. The temperature of the interior did not vary more than one degree the entire winter. The bees wintered very well.

Mr. Nellis thought bees winter nowhere better than under the snow. Bees under the snow are very dormant and consume but little. He prefers to have the snow as deep as possible; shoveled them out in the spring while the snow was dry. He favored Mr. Doolittle's plan of mixed wintering; that is, partly in-doors and partly out-doors.

Mr. Cyrenus said it makes some difference whether bees are kept on the ground or a short distance from it. He believed in having just a mound of snow over the hive, and not a heavy bank. With a heavy bank, the hives are apt to become damp. He has practiced keeping bees under snow, a dozen years. Mr. Nellis has kept bees under snow the same length of time, and Mr. Snow about three years.

Mr. Adsit said he had wintered bees in the cellar for fifteen years, with good success; never tried wintering out-doors.

The president said the best bee-keepers and writers differ from him on this subject. He has wintered bees under from one to fifteen feet of snow. He thought it important to have honey enough in the smallest number of combs. The matter of preparing for winter is the work of an entire season. Bees are from a warm climate, and need an even temperature.

Friend D., I should say, has made a very good point, in advising that we settle the old and long controversy about out and in door wintering, by advising to try some both ways,—on the principle of advising mixed farming. If you fail in one, you probably will not in the other.

QUESTIONS AND ANSWERS.

A few of these may be considered somewhat evasive; but as it is difficult to give positive answers to questions of such a nature, perhaps it was wisdom to give evasive ones.

In this climate, do we have weather cold enough to freeze bees, provided they have in the hive honey to which they have access? No.

Is the side-box system a success? "Yes" by two; "no" by one.

Is wired foundation a success when used for a brood-chamber? "No" by two.

Is it advisable to use full-sized sheets in brood-chamber? Yes.

Which is preferable, a hive without bottom, or bottom fastened to hive? Bottom fastened to hive.

Is comb foundation six months or a year old accepted by the bees as readily as that just made? No.

What amount of surplus room for box honey is it advisable to give a swarm at one time? What the swarm requires.

What is the best method of getting bees started in surplus boxes? Fill the boxes with comb.

Would you recommend full sheets of foundation for surplus boxes? One for "full sheets;" two for "starters."

Which is best, natural starters or foundation? Natural starters.

What objection is there to a center-bar in the brood-chamber? Does it not make a better winter communication than making holes through the combs? No center-bar needed.

What is the best quilt for wintering? Any thing porous.

What is the most convenient arrangement for side cases? "Our own" by two; "no side boxes wanted," by one.

Will it pay to construct an inner part just large enough to hold combs to winter 6 Langstroth or 5 Quinby frames, that will set into the main hive, the object being to carry just what is needed to the cellar, instead of the main hive; they can also be used for nucleus hives in summer? No.

What extractor is best for the beginner to use? A. I. Root's for honey; Swiss extractor for wax.

What time of year is it best to purchase queens when you have all natives, and want to change to Italians? Any time you have the money.

Is it objectionable for bees to breed in winter, say February? No breeding necessary till spring.

Are bees more inclined to supersede clipped queens than queens not clipped? No.

Can bee-keeping be made profitable in a locality minus basswood, with plenty of white clover, alsike, goldenrod, and buckwheat? Yes.

The quality of wax and weight of foundation being equal, which is preferable for use in surplus boxes, flat-bottomed or lozenge-shaped bottomed foundation? Bottoms as the bees build them.

Would it be advisable to take a swarm of bees known to be short of honey, into the house in a room without fire, giving them supplies till they are quiet, and then putting them in their summer stands for the rest of the winter? Be sure all have honey in the fall.

FRIEND FLANAGAN AND HIS VISIT TO THE FAIR.

IN the first place, I must thank you for introducing me to the most interesting and fascinating pursuit it has been my lot to engage in, and the more I become familiar with it, the greater hold it has upon me. I have succeeded, too, beyond my expectations. Beginning 2 years ago next March, with 2 colonies in box hives, and black bees, I had, in Nov. last, nearly 50, all Italians, and all in chaff and Simplicity hives. I have disposed of all but 25 to my neighbors, at good prices, and the remainder are in good order, in spite of the severe weather.

In October last I took to our county fair a lot of chaff and Simplicity 1½ and 2 story hives with glass observatory hives, Italian queens, fdn. machine (Dunham), honey in boxes and extracted, extractor, smokers, etc. It was a success, I assure you. I am not much given to talking, but I had to do more of it for the 4 days the fair lasted than for the same time in my life. The officers complimented me by giving me several premiums, a diploma, and assuring me it was one of the chief attractions of the fair. The result was, I sold and engaged every hive of bees I would spare.

I ran only 4 hives for extracted honey, and one hive for comb. The result was 550 lbs. extracted, or over 125 lbs. per hive, and 40 lbs. in section boxes. When I stated the above to those that thronged around my exhibit, few would believe the statement, as but little honey was gathered in this section, owing to the failure of white clover and the extreme drought. Mr. Chas. Dadant, son of the old gentleman, visited our fair, and afterward spent a day with me, and seemed pleased with my apiary, and said it was very good for an A B C scholar, and after examining nearly all my colonies, pronounced them very pure Italians. I have written to D. A. Jones for one of his Cyprian queens (direct importation), and have received a letter from him urging me to try Holy-Land queens, which he pronounces superior, if any thing, to the Cyprians. If I can spare the money, I think I will try both. E. T. FLANAGAN.

Belleville, Ill., Feb. 5, 1881.

Very well done indeed, friend F., and I am glad to hear that our fairs are becoming more and more a means of imparting and receiving information. After one goes to the trouble and pains of taking things as you have done, it is no more than fair that he should have some recompense for his trouble.

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FOUL BROOD, AND ITS EXTERMINATION BY A LAW OF THE STATE.

THE following is the contents of a printed notice which some friend has been kind enough to send us:—

State of Michigan. File No. 54. House of Representatives No. 96. Introduced by Mr. Root. Recommended by Committee on Horticulture. Lansing, Mich., Feb. 3, 1881.

A BILL to prevent the spread of Foul Brood among bees, and to extirpate the same.

SECTION 1. The people of the State of Michigan enact, That it shall be unlawful for any person to keep in his apiary any colony of bees affected with the contagious malady known as foul brood; and it shall be the duty of every bee-keeper, as soon as he becomes aware of the existence of said disease among his bees, to forthwith destroy or cause to be destroyed all colonies thus affected.

SEC. 2. In any county in this State, in which foul brood exists, or in which there are good reasons to believe it exists, it shall be lawful for any five or more actual bee-keepers of said county to set forth such fact, belief, or apprehension, in a petition addressed to the judge of probate, requiring him to appoint a competent commissioner to prevent the spread of said disease, and to eradicate the same: which petition shall be filed with and become a part of the records of the court where such application is made.

SEC. 3. It shall be the duty of the judge of probate, on the receipt of the petition specified in section two, of this act, to appoint within ten days thereafter a well-known and competent bee-keeper of said county, as a commissioner, who shall hold his office during the pleasure of said court; and a record of such appointment, and revocation, when revoked, shall be filed as a part of the records of said court.

SEC. 4. It shall be the duty of said commissioner, within ten days of his appointment as aforesaid, to file his acceptance of the same with the court from whom he received his appointment.

SEC. 5. Upon complaint of any two bee-keepers of said county in writing and on oath, to said commissioner, setting forth that said disease exists, or that they have good reason to believe it exists within said county, designating the apiary or apiaries wherein they believe it to be, it shall become the duty of the commissioner, to whom such complaint is delivered, to proceed without unnecessary delay to examine the bees so designated; and if he shall become satisfied that any colony or colonies of said bees are diseased with foul brood, he shall, without further disturbance to said bees, fix some distinguishing mark upon each hive wherein exists said foul brood, and immediately notify the person to whom said bees belong, personally or by leaving a written notice at his place of residence, if he be a resident of such county; and if such owner be a non-resident of such county, then by leaving the same with the person in charge of such bees, requiring said person, within five days, Sundays excepted, from the date of said notice, to effectually remove or destroy said hives, together with their entire contents, by burying them or by fire.

SEC. 6. If any person neglects to destroy, or cause to be destroyed, said hives and their contents in manner as described in section five, after due notification, he shall be deemed guilty of a misdemeanor, and punished by a fine not to exceed fifty dollars for the first offense, and for each additional offense he shall be liable to a fine not to exceed one hundred dollars, at the discretion of the court; and any justice of the peace of the township where said bees exist shall have jurisdiction thereof.

SEC. 7. The commissioner shall be allowed for services under this act, two dollars for each full day, and one dollar for each half-day, the amount to be audited by the board of supervisors.

SEC. 8. In all suits and prosecutions under this act, it shall be necessary to prove that said bees were actually diseased or infected with foul brood.

To all of which I would say amen, and express a wish that every State in the Union might set right to work and do likewise, until not a single foul-broody apiary exists any where between the waters of the Atlantic and Pacific. This is especially to be dreaded now, while so many are proposing to stock their empty hives and combs with bees purchased from abroad. Let us wake up, boys, and take the matter in hand, lest we find ourselves in the midst of a trouble that is many times worse than having our bees frozen out wintering, or being dead with dysentery or spring dwindling.

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

ONE claiming the name of Kirk Kidder has succeeded in extracting some $300.00 from the good citizens of this vicinity for the privilege of making and selling a patent bee-hive in this and adjoining counties. The patent, he claims, was secured by K. P. Kidder & Son, of Burlington, Vt., Mar. 22, 1868, and covers all arrangements for securing the surplus honey without disturbing the brood-nest; also the triangular top-bar for comb-guide. From what we know of other patents, we suspect he is a humbug. Can you give any light in GLEANINGS?

Moretz Mills, N. C., Jan. 17, 1881. H. A. DAVIS.

Any one who makes such claims as you mention are humbugs and swindlers, without question. The Kidder hive and the triangular comb-guides are both old matters of years ago, and, if I am correct, not now in use by our leading bee-men. This seems to be about the case of the average patents offered for sale.

Always look out for anybody who offers you more than the usual price for any staple article. The following letters will illustrate the point. Mr. L. D. Worth, of Reading Center, N. Y., had an application for honey from a New York commission house, as follows:—

We have a good demand for honey, and can find ready sale for *all* you have. We quote clover at 19 to 21 c., and buckwheat 18 to 20.

BALLARD, BRANCH & CO.

112 Broad St., N. Y., Oct. 8, 1880.

Friend W., thinking he would try one case first, sent it along. Here is their reply on receiving it:—

Your honey has been received, and contents noted. Please pack the rest so it will not shake. Send on all you can; worth 18 c. Will send sales of this box with the other lot you ship. B., B. & CO.

New York, Oct. 15, 1880.

Our friend wrote them he preferred the pay for the first lot before sending more. At this they made the following reply, and that is the last he ever heard from them:—

Do not send any more honey in the shape your last was shipped. It was all smashed up in very bad shape; will do the best I can with it, and report as soon as closed out. B., B. & CO.

New York, Oct. 27, 1880.

He finally referred the matter to us; and, although they have a fine large printed letter-head, as commission merchants at 112 Broad St., New York, we are unable to find any such firm quoted at all in the mercantile agency books. We at once wrote them, courteously asking for an explanation; but although nearly a month has passed, no word can we get.

Moral.—When anybody wants you to send them honey, inquire at your nearest bank if there is any such firm, and if they are in good standing. If not, by no means send them a pound of honey unless they send you cash in advance, or deposit the funds in a bank subject to your order on presentation of a shipping-bill from the railroad company.

EXPERIENCE NOT FOUND IN THE BOOKS.

THE SWARMING-OUT MANIA.

I NOTICED in last year's GLEANINGS a good many complaints in regard to absconding swarms; but among the cases reported I found nothing to equal my experience. My refractory colony was a good hybrid—the only hybrid in my apiary. At the proper time, and before they were taken with the swarming mania, I "swarmed" them artificially. They were getting along nicely,—commencing to fill up the sections when the fit came on them. The queen's wing was clipped, so I caught her as she perambulated in front of the hive, and caged her; then while the swarm was clustering on an apple-tree I opened the hive and completely demolished every queen-cell. As the swarm came back I gave them their queen, thinking to myself, "There! now you are all right; go ahead with your honey business." But not a bit of it. The second day after this, bee-hold! out they came again. Well, thinks I, if you know better than I do, I'll let you keep house for yourselves. So I hived them, giving them brood in all stages. (I found that the queen had deposited an egg in a queen-cell just before leaving.) But the end was not yet, for, two days after this, *they came out again.* I saw the queen return to the hive *on foot* after trying in vain to follow the swarm. So I did not pay much attention to the would-be absconders, as I thought they would, as a matter of course, come back to the queen. But they finally struck a bee-line for—some other place. Now you will say they had two queens; but wait a minute. When I saw that they determined to leave, I followed them on horseback. They got the start of me; but as they went only about three-fourths of a mile I found them anyhow; but neighbor C. had been ahead of me. He saw them alight on a peach-tree, so he ran and got an old hive and hived them, and when he found what I was after *he claimed them as his own property!* Now, what was I to do? What would *you* have done if in my place? He said he didn't know where they had come from. I wouldn't quarrel with him, although I knew well enough *where* they had come from. I told him that they were queenless, and would not do him any good in that condition; that the swarm should either be brought back to the queen or the queen taken to the swarm. But he only laughed at the idea, and said, "Oh! well, we will catch old Grant and make a *king* of him for them, then they will be all right." As I saw that he would not listen to reason, I started back saying, "Well, I have still the better part of the colony at home, for the queen without the swarm is worth more than the swarm without the queen," and so it proved; for by careful attention to the queen and her handful of faithful subjects who were left behind, they built up a fair-sized colony by the time neighbor C.'s had dwindled down to the "little end of nothing." I believe he had a little drone comb left for his trouble.

But that old hybrid queen will not be deserted in that way any more, for I finally beheaded her and gave her "throne" to one "to the manor born"—the daughter of an imported queen for which a prominent breeder says he "refused 50 dollars." (!) Have you any Italian stock you prize so highly?

S. P. YODER.

Vistula, Elkhart Co., Ind., Feb. 10, 1881.

I do not know, friend Y., just what I should have done in such a case; but I know what I once did: I paid the man $5.00 for the privilege of carrying my Italians back home. They had united with a very small weak second swarm of blacks, belonging to him, and so I was helpless in my case. I should say the thing to do would be to present the matter to your friend in the kindest and plainest way you know how, and then, rather than have any unkindness, either let him keep them or pay him what he thought he ought to have for them, and go home with the firm resolution in your mind not to think hard or unkindly of him, and, in fact, not to think of the transaction at all, if you feel you have been wronged, any more than you can help. "Charity suffereth long, and is kind," you know. I have no stock of any kind that I prize so highly as you mention.

Our Lunch-Room.

OATMEAL FOR FOOD.

AS you are agitating the question of cheap food, I wish to say a word or two, although it may be nothing new to you. I send you to-day by mail one sample of oatmeal, "steel cut," which retails with us at 5 cts. per lb.; also one sample of "B Scotch" fine, that retails at 4 cts. per lb. We use it in the morning as boiled mush, eaten with syrup and butter, or milk, or it may be cooked in various other ways; it is good and cheap, and has properties in larger quantities (bone-forming, etc.), than corn or wheat. There is a mill in this place, of the capacity of 140 barrels per day, a large proportion of which is shipped to Scotland. If you should wish to procure any of this, with prices by the barrel, write to Stein & Wallace, Sterling, Ill. NORMAN CLARK.

Sterling, Ill., Feb. 8, 1881.

Many thanks, friend C. I entirely agree with you in regard to the healthfulness and bone-producing properties of oatmeal. We had the samples you sent cooked and served up, but can not for the life of us see any difference. Four cents per lb. is much cheaper than we have ever known it sold at retail before. The following in regard to the value of oatmeal we clip from *The Metal Worker* of July 24, 1880.

DRINKS FOR THE HOT WEATHER.

A doctor who has been a very careful observer and has had ample opportunity for study, gives the following advice in regard to the drinks suitable for hot weather:

When you have any heavy work to do, do not take either beer, cider, or spirits. By far the best drink is thin oatmeal and water, with a little sugar. The proportions are a quarter of a pound of oatmeal to two or three quarts of water, according to the heat of the day and your work and thirst; it should be well boiled, and then an ounce or an ounce and a half of brown sugar added. If you find it thicker than you like, add three quarts of water. Before you drink it shake up the oatmeal well through the liquid. In summer, drink this cold; in winter, hot. You will find it not only quenches thirst but will give you more strength and endurance than any other drink. If you can not boil it, you can take a little oatmeal mixed with cold water and sugar, but this is not so good. Always boil it if you can. If at any time you have to make a long day, as in harvest, and can not stop for meals, increase the oatmeal to half a pound, or even three-quarters, and the water to three quarts if you are likely to be thirsty. If you can not get oatmeal, wheat flour will do, but not quite so well. For quenching thirst, few things are better than weak coffee and a little sugar. One ounce of coffee and a half-ounce of sugar, boiled in two quarts of water and cooled, is a very thirst-quenching drink. Cold tea has the same effect, but neither is so supporting as oatmeal. Thin cocoa is also very refreshing and supporting likewise, but is more expensive than oatmeal.

When a person is working hard and perspiring freely, the craving of the stomach, if closely considered, is as much for food as for drink. Cool, easily digested food is what is needed. If one watches a number of growing boys at work hard, he will find that as noontime approaches they go to the water-pail more frequently. A slice of bread and butter given at such a time will almost invariably stop the thirst and for a longer time than a hearty drink of water. If the food can be given in a liquid form, so much the better. Some workmen use a regular gruel, made rather thin, instead of water, and are greatly benefited thereby.

While there is a cry on every side that Americans eat too much, we are inclined to think that a little food taken both for noon and afternoon in the drink, would increase both the health and comfort of our workmen and be of lasting benefit to growing boys.

DRIED OR EVAPORATED GREEN CORN.

This article of food seems to be eliciting much interest, and among the several offers I have had for a ton, to be furnished during the coming year, is one of 8 c. per lb. Inasmuch as 1 lb. of dried corn furnishes a great deal of nutriment, I think this price pretty fair.

GATHERING AT THE TABLE.

While I would not encourage in our readers a disposition to be thinking constantly of what they are going to eat, I think it conducive to one's health to take some interest in what they are going to have to eat, and to feel a pleasure in gathering round the daily board. What mother has not felt a thrill of honest pleasure in hearing the children exclaim, "Oh goody! mother is going to give us some of those nice biscuits and honey for supper"? Is it not better than to have them come in a lifeless sort of way and look and act unthankful while the meal is being eaten? I would by no means task the mother to get a great variety, for oftentimes one simple little dish, say something the children have asked for, does more to make a meal a happy one than many expensive and troublesome dishes. Neither does it all devolve upon the mother, by any means. Let each one be led to try to contribute in some way to the general good feeling. One can bring flowers, another some apples, or other fruit. Have the boys stimulated to feel a pleasure in providing water, and another in getting the chairs, and all, in trying to be quiet and good natured. For many years I fought against the use of napkins at the table, and called them aristocratic, etc.; but now I can hardly feel right to eat without one, or see the children do so, because I know how much they aid in helping us all to keep our clothing neat and presentable. You all know what fun it is to sit down to a cozily arranged table at some quiet family picnic. Well, let us have just such a little family picnic every day; and if we all try our best, it will not be a very hard task to have each meal so that, when we bow our heads to God in thankfulness before the usual "asking-a-blessing," there shall really be thankfulness welling up from the bottom of our hearts. Hurrah! it is supper time now! Come on, children! let us go to supper, and let us see who will show mamma by our actions that we appreciate the efforts which she has made to please us.

FRIEND LADD'S STORY.

IN WHICH HE TELLS HOW THE HONEY HUNG ON "POSTS AND BUSHES."

JUST a few words from our bee country may not be out of place. One of your correspondents reports an enormous yield of honey, such as we had in 1878, only ours was a little more so. It was such a yield as to cause the bees to fill up every thing in reach, build all over sides of hives, and in some cases on posts and plants, some feet away from the hives. One colony in box hive filled up, and I placed an old empty hive close to it, which was filled in 3 weeks with beautiful honey (no bee bread) and many times I took buckets full of honey from under benches and projections. Swarms issued all summer, and no drones were killed. Every thing seemed to bear honey; very heavy honey-dews, also, helped to swell the crop. I drove many out late in August, and transferred, keeping all the honey, and they filled up in a few weeks. Swarms were found under large limbs on trees, with several sheets of comb. We had no extractor, or we might have taken an enormous quantity. One swarm of a neighbor's came out late in June, went back to hive, clustered outside, and built between two hives. When asked to transfer them, they had 17 sheets of comb built the height of the hives (box) about 18 inches wide. I did transfer them, but was covered with stings (I can sympathize with Bro. Duster.) They got "on their ears," and some followed me over a mile toward home. I had made little headway in controlling them, and they kept things lively around that house for a week. Well, they filled a "Mitchell" hive in less than three weeks, and I took from it eight full frames, giving empty ones, which were filled as rapidly as at the first. That swarm is famous to-day for honey and stings. All our bees are blacks. No full record was kept, but many times I have weighed 50 lbs. taken at one time, and from one hive. Badly broken comb honey sold that year for 6 and 8 cents. Now comes the other part. Three-fifths of our bees died the following winter, leaving the hives mostly full. Since then I have not taken one surplus box full. We have had a honey famine for two years, but have hopes of 1881, and reports of hundreds of dead colonies of bees. One question: Is it the exception or rule for Italians to refuse to work in top surplus boxes? **ED. LADD, JR.**

Beverly, Macon Co., Mo.

Thank you, friend L.; for now that we know what may happen, we will just have every thing in readiness to take care of that honey when it comes. I believe it is pretty well settled, that Italians will not take to the boxes as readily as the blacks, unless we make special provision to get them started by large starters in a few of the boxes, and such like means.

Heads of Grain,

From Different Fields.

HOW I RAISE MY QUEENS.

I HAVE been a pupil in your A B C class three years, and I would like to tell you how I raise my queens. I go to my imported queen's hive, spread the combs, suspend a new empty comb between the brood, and after finding eggs sufficient, or after 3 days, I lift out the frame and replace with another. The frame of eggs, or minute larvæ, is cut into two zig-zag or tooth-shaped forms, then given to a strong colony, made two days before, having no queen, and all brood then sealed taken away. After 3½ days the small or poor larvæ are destroyed in some of the cells. After cells are sealed over, they are cut out to be put in the lamp nursery.

HOW I HATCH MY QUEENS.

The cells are each put into a small block cage, point down, fastened by touching with a small dab of beeswax, melted over a lamp chimney in a tin cup. Soft bee candy is put into each queen-cage for the young queen's first lunch, made from 5 pts. A sugar, 1 pt. grape sugar, 1 pt. honey. The cage is then covered with a loose piece of wire cloth, and put into a common brood-frame with other similar cages, and hung in the nursery. On this principle, no cells are destroyed by the young queens, and are all ready to be carried to the nucleus. The slides are then pulled out of the cage, and the young queen forced out by a few puffs of smoke at the entrance of the nucleus. JOHN CONSER.

Glenn, Johnson Co., Kan., Jan. 28, 1881.

The above plan differs but little from the usual way, only that we rather prefer to keep a close watch of the queens, and put in hives just about as fast as they hatch, and let them take their "first lunch" from new honey just brought in from the flowers. We seldom have queens sting each other in the nursery, if they are looked to pretty often.

CAN "WE" MAKE A LIVING?

Three months ago I ventured to take a "partner for life;" have settled down on the plan of "Ten Acres Enough," with the intent, however, of making bee-ism our principal business; still working at light forms of job printing for indoor work, as I am not able to *farm* even a few acres. Do you think we can make a living?

MAPLE-SUGAR BEE CANDY.

I have only 13 colonies of bees, all good stock; but several of them are about out of honey. I am feeding them now on maple sugar in "bricks." Can I carry them safely through? I have already found a number of our neighbors' bees "played out;" some small colonies are frozen, with honey all around them; others starved in empty hives.

S. P. YODER.

Vistula, Elkhart Co., Ind., Jan. 11, 1881.

Yes, friend Y.; I do think that you and that new partner can make a living, without any doubt about it at all, providing you are willing to accept such a living as God sees best to give you. Make expenses come inside of the income; make economy one of the fine arts, and years hence you may look back to these days of trust and trial as having been the very happiest of your lives.—The maple sugar, if of fair quality, is all right, and makes very good bee candy. Little cakes, such as are made for the children, are just right for a weak colony of bees to warm up. Friends, can not we who forget to sign our names now and then, give friend Y. a little lift in the way of an order for printing a few envelopes or letter-heads?

UNPAINTED HIVES, VERSUS PAINTED.

Inclosed please find a note on "Painting Bee-hives," which I cut from a recent copy of the New York *Times*.

> PAINTING BEE-HIVES.—Some persons paint their bee-hives, but it is not generally thought advisable by bee-keepers. It is very important that hives should be dry inside, and unless the walls are porous the moisture will condense inside whenever the temperature is low outside. If the wood is painted it is made impervious to moisture, and this will collect inside and do mischief. If the bare wood is thought to be disagreeable in appearance it may be washed with a porous coating of water-lime, which is brown, or the hives may be washed with lime colored brown with ocher or umber.

I believe I have never examined a hive occupied by a colony of bees for even one season, in which the entire inside surface (accessible to the bees) was not completely coated with propolis, rendering the walls of the hive impervious to moisture, from the inside. Now, if I am right, what harm can there come from having the hives well painted, thus protecting the walls from the moisture outside?

H. C. MARKHAM.

Ann Arbor, Mich., Jan. 29, 1881.

There is an element of truth in the paper you send, friend M.; but still it is thought best to paint hives, and make some other provision for the escape of the dampness and moisture. It is for this reason we make the chaff hive in such narrow pieces, principally, that the dampness may escape in the cracks between the narrow siding. The Simplicity hives, having a loose cover, usually permit all the evaporation that is needed in the summer time, and, with a mat over the top, about all that would ordinarily be needed in the winter. Tight box hives, with no openings in the top, or but few small ones, would very likely winter bees better unpainted; and if the boards were rotten a little, and checked by cracks, they would be better still. This is why bees often winter better in such hives than they do in new, tight, painted ones. The propolis on the inside, I hardly think as impervious to moisture as is the paint; but still, it is a significant fact, that the bees always seem to prefer to have things pretty well waxed at the approach of cold weather; and with a hive like the chaff hive, I think they are the better for the propolis. Stocks that are strong enough to have the whole interior of their hive well propolized, are pretty sure to stand the zero freezes, if my observations have been correct.

THE "BLESSED LITTLE PETS."

I tried to run my bees one year without the aid of GLEANINGS, and found it could not be done. Honey in this section of the country was almost a total failure. We were compelled to feed almost every month during the time the bees were out of the cellar, only some few stocks being able to get their winter supplies during the entire summer; but, sir, desperate cases require desperate remedies. Speaking for Bros. Kendig and Stephens, as well as myself, we came to the rescue and stocked our bees out for winter with sugar syrup, and I say that the man or men, as the case may be, that will allow their bees to starve (as hundreds are doing), solely because they are too negligent or stingy, as is the case with many, they are not worthy the name of a man, much less of a bee-keeper. In years gone by, when we had good crops of honey, and the "ducats" were coming in, then your bees were called "blessed little pets" and the like. Last season, when your bees worked harder, perhaps, than ever to keep from starving, can you stand by, as it were, and see them starve, and at the same time, perhaps, you are "luxuriating" on the strength of the above ducats? Now, friends, don't you think, if your "blessed pets" could speak, they would look up and say, "*Don't, please don't*, let us *starve*. Loan us 5 or 10 per cent of the above ducats, and we will pay you back threefold next season"? Does not your conscience tell you so for them, friends? These are my convictions. I have given them to you with malice toward none, and charity for all, including the pets.

Ed. Stover.

Naperville, DuPage Co., Ill., Jan. 28, 1881.

A GOOD LOCATION FOR AN APIARY.

Three miles over the mountain is a large territory of raspberries, perhaps 1000 acres, and lots of spotted maple and fireweed, and there is a great deal of what I call "yellow weed," that blossoms in July, August, and September, and there is a great deal of white clover, willows, etc. Now, do you think I could keep 60 swarms of bees, and have them do well in my locality?

SPRING MANAGEMENT.

Now, friend R., I will tell you how I manage with my bees in the spring. When I set them out to work, I take off the upper story and put on the enamel-cloth cover over the lower story; then I put the upper on again, and put the cover on the hive, etc. Now, if I ought to fix them any differently, please state how I should do so for the spring, to have them right for breeding.

BUILDING BEE-HOUSES.

I am going to build a new bee-house this spring for my bees. I should like to set my bees out in a yard made for that purpose, but I can not keep bees out in a yard here, for every fall there will be minus the number you put there in the summer time.

PUTTING A SIMPLICITY STORY OVER BOX HIVES.

I have 13 swarms in 2 story Simplicity hives, and 5 in old-fashioned box hives. I took the tops off as you directed me to last spring, and put on a 1-story Simplicity, filled with sections. They swarmed all around, and made some honey in the sections besides.

CELLARS FOR WINTERING.

Now, I want to build a cellar on purpose to winter my bees. My old cellar is very wet in the spring. The one I talk of making is on a dry, warm plain, and I want to make it large enough for 60 swarms, and have a work-shop in the upper part.

R. H. Bailey.

Ausable Forks, Essex Co., N. Y., Jan. 22, 1881.

I should just like the fun, friend B., of keeping 60 colonies in such a locality as you describe.—I would fill those upper stories with chaff, by all means, and leave it on until you want to put on the surplus boxes; but by far a better way would be to have them in chaff hives all the time, if you wish to have them breed up rapidly in the spring. —I would not build any sort of a bee-house. Better by far. use the time and lumber in building a tight high fence around your apiary. If anybody gets into such an inclosure to steal your bees, it is an indication that you are in a bad neighborhood, and that you are to blame for not trying to make it better, in the way I have so many times pointed out to you.—Neither would I build a cellar for bees. Use the same capital in giving them good protection on their summer stands, each hive in its proper accustomed place.

A DEAF AND DUMB A B C FRIEND.

I have but 4 stands of hybrids, and I am fond of attending to them. Though I am deaf and dumb, I have handled bees a great deal in my life, and had been without bees for 15 years until last spring, as I had no permanent place then. Have read Quinby's, King's, and Langstroth's books through several times. I use the Langstroth hive.

Richmond, Ind., Jan. 31, 1881. J. E. Townsend.

Just imagine, friends, how it would seem to be unable to hear the hum of a single bee, or in fact any sound of any kind at all. As I look upon the words our brother writes, a strange feeling comes over me. It is possible he has never heard a single one of the words pronounced, which he writes just as you and I do, and yet he seems to be just as well acquainted with their significance as we are. May God bless and help you, brother; and may it be a lesson to us, as we ponder for a minute, to forget not to give thanks, that we both hear and speak.

CORN-COB BRAN VERSUS CHAFF.

Many eggs are now shipped from the West, packed in corn-cob bran, or ground corn cob. After the eggs are sold here in the East, the bran is thrown away. Would not this corn-cob bran answer for filling for chaff cushions better than chaff, which is not so plenty here, unless you are a farmer, and raise your own chaff? R. E. Holmes.

West Winsted, Ct., Feb., 1881.

I would use it, without question, friend H.; and I have no doubt, from the way mice nest in it, it will prove even warmer for the purpose than our usual chaff. Of course, the hives need to be made so no mice ever get at it while around the bees. Thanks for suggestion.

AN A B C SCHOLAR WITH BOX HIVES.

I bought two old box hives in the spring of 1879, with very few bees in them; but I managed to build them up so that one of them gave me a small swarm the last of July. I put them in a box hive because I knew of nothing better. It being a good year for honey, they gathered enough to go through the winter, and the old hives gave me about 40 lbs. of surplus. I wintered under cover in the side of a bank, and they came out in the spring of 1880 somewhat dwindled. One of the old hives gave me two swarms, which I united and put in Simplicity; from the other one, which I also put in the same, I got no surplus. In fact, I got none from any this year. I now have them down cellar, and I think they are doing nicely. How is this for a beginner in A B C?

L. S. Smith.

Cherryfield, Washington Co., Me., Jan. 17, 1881.

Very good, friend S., and I really believe the best way for a beginner to start, is to get box hives and common bees at a small expense. When he can manage the box hives, he certainly can the others, and if he makes a failure, he is not very much more out of pocket.

LANGSTROTH FRAME FOR COLD CLIMATES.

Would you advise the L. frame for a cold climate? Is not a deeper hive better? Will it not protect the bees better in winter? H. K. GREGORY.

Youngsville, Sullivan Co., N. Y., Jan. 17, 1881.

A colony without protection might sometimes winter better in a deep frame; but the best arrangement for winter is to have the top and bottom of the combs so near each other that the bees are clustered on both, and over a good part of the bottom-board to the hive. If the bees filled the interior of the hive, so that there were bees all through, and even part way into the entrance, even in the coldest of weather we should have the best condition, and no other frame admits of this so well as a shallow one. A shorter frame might be better, perhaps; but if we have a pretty strong colony, it makes little difference. As a general thing, I think the L. frame better for wintering than a deep one, where they are properly fixed up for winter.

HONEY THAT IS GRANULATED IN THE COMBS.

We use the L. frame, and wish to extract 100 frames, all in the super. Our bees have plenty honey in brood-chamber to winter on. The honey in frames has granulated on lower and some on upper edges of combs, and the other is so thick that we can't throw it out of combs. Please let us know if there is any way by which we can extract it. What effect will warm weather have on it? How will bees winter on granulated honey?

There has been more cold weather here than ever known before. FLOURNOY & FOSTER.

San Antonio, Bexar Co., Tex., Jan. 20, 1881.

The thick honey can be extracted without trouble with any good extractor. First warm the combs up gradually, until the honey runs easily. This will take quite a little time, for solid honey is a poor conductor of heat, and warms slowly. It will not do to have the room in which the combs are stored too hot, or they will break and fall out of the frames, as has happened more than once in trying to extract in cold weather. With the granulated honey, you have a harder matter still; but if you can warm it so it will come out of the combs, you can easily melt it afterward. If you do not succeed in getting it out, I would use the heavy combs in building up stocks. The bees will use the candied honey readily, when the weather is warm, and without any waste. Bees will winter on granulated honey if they can get water to dissolve it; but it is apt to be somewhat like grape sugar, which it really is, virtually.

HOPES NOT BLASTED AFTER ALL.

I thought I would drop you a few lines concerning my bees. Last spring my colonies numbered 10, which were in fine condition, except 2 or 3, which were prevented from breeding until quite late, on account of not having pollen; but still they all turned out to be fair colonies. At the beginning of the honey harvest, which was very poor here this season, apple-bloom came and passed away, yielding scarcely any honey. White clover was a failure; basswood was a failure; in fact, the bees barely made a living until the fall flowers opened out. Buckwheat did not amount to much, on account of the dry weather; the bees worked on it only awhile in the morning. Smartweed, Spanish needle, and other late flowers, yielded abundantly. The bees soon filled their hives with honey, seemingly in a fine condition for winter. The first of November I prepared them for their winter nap, removing all the frames but 6, filling in with chaff on each side, and on top of the frames; I then placed the hives in a row, and packed straw around them; the swarm with my Italian queen was put in a chaff hive with 4 inches of chaff on each side, and I filled the upper story with straw, thinking they were in fine condition for winter. They were not examined until the last week in January. I thought I would look at them; but, alas! what did I find? 7 stands out of the 11, including my chaff hive, were as dead as mackerel. They had the dysentery, which was caused from the late fall honey, and the long-continued cold weather. Mr. Root, don't this look like Blasted Hopes? This leaves me with 4 stands at present; but I haven't much hopes for them if it don't come out warm pretty soon, so that they can take a fly. However, my hopes are not blasted yet.

Cicero, Ind., Feb. 2, 1881. ELIAS BERG.

I fear, friend B., we shall have to go back to the sugar feeding, as so strongly recommended by GLEANINGS the first year it was started. I have never seen a case of dysentery under the conditions you mention, where they had stores of pure sugar. I think, however, I should have preferred the hives left on their usual stands, instead of placing them in a row with straw around them. You see, the sun and wind could not get at the outside of the hives to dry them out, and I fear they became damp.

WINTERING IN CELLARS.

I have kept bees for more than fifty years, but I have all these years had but little knowledge of them, and not until about four or five years since had my attention called to the fact of my ignorance in this matter. The thought had not entered my mind but that the colonies of this insect in the common box hive must occupy their summer stand through the long winter months, and suffer the freezing and thawing, and take their chances of life or death as best they could; and if they survived, all well; if the poor things died, it was but incidental to bee-keeping. In 1854 I came from the State of New York to this place. In 1860 a friend presented me with a swarm of bees, giving varied success of yearly harvests of honey and increase of bees, with losses, etc. About four years ago a new light dawned upon me. I saw most clearly that I had been groping in darkness in relation to bee culture. I had gathered around me over 100 swarms (all from the one) in box hives. I offered them for sale, and within the two years past, have sold over 100 colonies, and have now 34 swarms in Langstroth hives — 15 of them Italians, in my cellar, and, so far as I can see, in first-rate order. I think this is the sixth winter that I have put bees in cellar. One or two winters I took off entirely the bottom-board, the hives standing on two scantling 2x4. This winter I set them on the timbers with bottom-board, and in the honey-board a ventilator, with wire cloth over it. My cellar is perfectly dark and dry, sandy bottom, at the entrance double doors, and in the room directly above I have a stove, with fire night and day. A stovepipe 6 inches from the bottom of the cellar, connects with the stovepipe above, with a constant rush of air passing up it. Another ventilator from the outside conducts air from the outer world into the cellar, which has a regulator to shut off the air when I wish. The bees were put in the cellar Nov. 15th, and have been dry and quiet up to this date, Feb. 2d. They were perfectly dry when put in the cellar. In this room hangs a thermometer that has indicated between 35 and 42 degrees above zero.

D. ALCOTT.

Broadhead, Green Co., Wis., Feb. 2, 1881.

I presume you know, friend A., that the plan you give is almost, if not quite, exactly as I have described it in the A B C for cellar wintering. We have many reports like yours; but occasionally we have reports, too, of the bees coming out and flying all over the cellar, when, to all appearance, the circumstances were exactly the same. That those who failed to winter safely in the way you mention fail in doing so now, would seem to indicate a disease, or some new state of affairs. Were winters all like the present one here, I should feel a great deal more like advocating cellar wintering. It may be that unwholesome stores will account for the troubles in wintering in such cellars as yours.

HONEY FROM SKUNK CABBAGE, ETC.

I wintered my bees in the open air—just enough cover on them to keep them dry. They are all in good condition, and working finely to-day. The black, or highland willow, is now in bloom; it is about two weeks earlier than usual. The skunk cabbage will be in bloom by the first of February. It is the king of all flowers in its season. The honey from this plant is highly recommended for all kinds of colds, cough, and lung diseases. I have used it in my family for eight years, and know it to be good. The honey is very white and thick, with excellent flavor. I use a great deal of honey in my family, and haven't paid a doctor's bill for eight years. Do you know any thing about skunk cabbage? W. E. MCWILLI.

Collins, Benton Co., Oreg., Jan. 19, 1881.

I do not, more than it has been several times mentioned as a honey-plant.

PERFORATED SEPARATORS, DIVISION-BOARDS, ETC.

I see from GLEANINGS of January, p. 10, that you and some of your correspondents are experimenting on perforated metal for separators. I am of the opinion, that where division-boards are used in the body of the hive, wood is preferable to metal. I find that if a number of saw-kerfs are made in the division-board 3-16 of an inch wide, that it will allow the worker bees to pass, and yet exclude the queens and drones. The division-boards should be put into the hives with the ends to the sides of the hive, so that the boards, swelling from the dampness and heat of the bees, will not tighten against the sides of the hive. I would make the number of saw-kerfs that I wanted, cut in about ¾ of the length from one end, or part of them may be made from each end; then nailing on the end sawed from, a small strip to keep them in place or from springing. A number of boards could be sawed at once, either by setting a ripper so coarse as to make a slit 3-16 of an inch, or by making your circular saw to run wabbling. I do not think that round holes (especially through metal) made small enough to exclude the queens and drones will ever answer the purpose; for the worker bees, in passing, would rake the pollen from their legs. If I understand Mr. Jones aright, his plan was to use his separator only in the body of the hive; and the one he had in Toronto last fall at the Industrial Exhibition was of the full width of the inside of the hives. W. B. TERRY.

Keswick, Ontario, Jan. 18, 1881.

FRAMES WITHOUT BOTTOM-BARS, AND SIDE-BARS ONLY PART WAY DOWN.

Now, about my way of building frames: I do not know that other folks' bees build their combs as mine do. I have used the Langstroth hive, and I noticed that there was considerable space in the hive that the bees could not use, and, in my way of thinking, this space was even worse than useless, if possible. My bees build their comb, attaching them to the frames about half way down, then leaving the space between the comb and frame that they naturally leave between the comb and hive in common box hives. Now, I make my frames with top-piece as usual, and side-pieces ⅛ in. thick reaching down about half way. I have used a tin brace from side-piece to top-bar, but I think your metal corners are better. The bees attach their comb to said side-pieces down as far as they go, and then leave about the same space between the comb and hive down and across the bottom that they would inside the frame. You see, I am saving the space outside of frame, and the thickness of frame, which space, I think, is a disadvadtage to the bees in more ways than one; and I also think the combs are as movable as when built in frames. D. S. HALL.

South Cabot, Wash. Co., Vt., Jan. 29, 1881.

Your idea is not an old one, friend H., and it no doubt would have been adopted long ago were it not that the bees will occasionally build out such combs and attach them to the hives, so as to be any thing but movable frames, when we have a good yield of honey. Of the truth of this you can easily satisfy yourself. In transferring from box hives, you will find almost, if not quite, every old hive will have the combs securely attached to the sides of the hive, and sometimes bottom-board also. Your combs are as you state, because your bees have probably never been through a great yield of honey, with but a limited space to store it in. Another thing: when handling such combs full and heavy with honey, in very warm weather, they are almost sure to break out of the frames. It is also very inconvenient to lay down such a comb without its receiving injury, or being constantly liable to it. I would suggest, that the side-bars be made light and the bottom-bars thin, and then, by fdn. or transferring, make the bees extend their combs clear up to the wood all around. By this means we save the waste room in a hive as you mention, do we not?

FROM "OUR A B C CHILD."

The cold weather has let up at last, and bees are flying finely to-day. Every one of my 24 are extra strong, and examination shows brood in all stages; and, strange to say, while the thermometer was 40° below zero, and I anxious for fear of their freezing, they were, in truth, *too* warm. Certainly the chaff packing is *the* thing with young bees and heavy swarms. What is your price of a Cyprian queen? I want a Cyprian queen to try in this "land flowing with milk and honey," as one man calls my locality. I shall say no more about my honey yield, as I see many doubting it; but I like to jingle my money for it all the same. I have offered to bet that I could double it next season; and if I don't make a cent I have enough of this year's product to carry me over.

Arcadia, Wis., Feb. 7, 1881. E. A. MORGAN.

I am very glad indeed, friend M., that you found the chaff hives *too* warm this cold winter, for I guess "too warm" must have been just about right this time. I am sorry to say we have but one Cyprian queen now, and no Holy-Land queens at all; so I think you will have to go right to friend Jones. We are glad you have got the money to jingle, but don't bet, please; for if you should, I should feel pretty sure that next year would not be as good as the last one; and, indeed, I am afraid you might never have any more good years; not that I think the seasons would be bad, necessarily, but I am afraid you would not work with the honest zeal you have shown in the past year.

A GOOD REPORT FROM ONLY SEVEN COLONIES IN THE SPRING.

I have 14 stands of bees, all of which seem to be wintering all right. I use the Quinby closed-end standing frame, packed on all sides, and on top with loose chaff, and I like them very well for my use. I will give you my report for 1880, which I think is not bad for the season, and a new hand.

From 7 swarms in spring,

Honey sold, 470 lbs.,	$70.18
Bees "	8.00
Honey kept for use, 90 lbs.,	14.40
Increase, 7 swarms,	35.00
	$127.58
Expenses, including 100 lbs. sugar fed in fall,	44.00
Balance,	$83.58

Section-box honey,

Best black swarm,	100 lbs.
Poorest black "	90 "
Best Italian swarm,	90 "
Poorest Italian "	20 "

My experience with Italians does not place them ahead of the blacks for comb honey in this locality; but for raising bees, and swarming, they can't be beat. D. O. SWEET.

Rockport, Cuy. Co., O., Jan. 24, 1881.

INSTRUCTIONS IN BUILDING UP AN APIARY.

I should like to build up an apiary.

1. Will begin with 3 stocks; one best Italian, two blacks.
2. Can buy perhaps 200 empty combs.
3. Will buy all the fdn. necessary.
4. Will set out in chaff hives as early as weather will permit.
5. Will use sugar every day for feeding that is economical for the whole season.
6. In honey season, I want stocks *strong*. When it *ceases*, then *feed*.

Please give instructions in your next issue.

Albany, Ill., Jan. 25, 1881. Z. D. PADDOCK.

Why, friend P., you do not need any instruction, that I see. Your head seems to be "level," all the way from first to sixthly. Just go ahead, and do so. As to buying those combs, do so, by all means, unless you will have to pay more for them than you can get frames filled with fdn. for. Unless the combs are extra nice, I think I should prefer the fdn.

SELLING BEES.

We have a hard winter on bees. My bees in chaff hives are almost all dead, so we will have a nice time for increasing in the spring. I should like to sell you some bees by the pound. I would like to bring you a load every ten days from about the middle of May.

ARTIFICIAL SWARMING.

Now I will tell you my way to increase bees. I take 3 strong stocks, which I call No. 1, 2, and 3. Now I drive all the bees out of No. 1 and put in a new hive with combs, and call it No. 4, and put it where No. 1 is, and move No. 3 to a new stand, and put 1 in its place, and give 1 a queen, and in 5 days I drive No. 2 and put them in a new hive with comb, and put it where No. 2 stood, and give 2 a queen, and move 1 to a new stand, and so on every 5 days as long as you wish. C. J. YODER.

Orrville, Wayne Co., O., Feb. 3, 1881.

I would suggest to friend Y., and many others who propose to sell bees, that by far the better way would be for them to advertise the bees by the pound, and then ship them direct to those who want them. If I buy them, it will be only to sell again; and with the experience I have had, I should have to buy them at about half what I sell them for, to cover expense of shipping-cages, and losses in transit, etc. If you send them direct to the consumer, all this will be saved. As bees must always go by express, there will be none or but little advantage in having them sent with other goods. I think it likely that, with a good allowance of Viallon's candy, we shall be enabled to dispense with the troublesome water-bottles; but this yet remains to be proved. I can furnish you boxes for shipping bees, at a small price. It is my impression that the food should be placed above the cluster, and that the bottom of the cage should be of wire cloth. Your plan of increase is virtually the one Langstroth gives in his book, and is one that was practiced for artificial-swarming box hives. The advantage of it is, that instead of dividing a colony into two, you only make one new one from two old ones. It is a very safe way of increase, but I think it has been mostly abandoned, because it is too troublesome.

TALKING TO BEES.

Do you think a person can injure bees by talking to them? A man told me that he sold two swarms of bees, and then he asked the owner's consent to talk to the bees. The man said he might, and so he talked to one swarm. He said,—

"I want the first swarm that comes out of this hive to run away to the woods, and the second swarm I want the millers to destroy."

Well, when the first swarm came out, surely enough they did run away to the woods, and the second swarm filled the hive two-thirds full of comb, and then he said that one day the bees were all laying on the outside of the hive. Then the owner asked him if he could tell him what the matter was with that second swarm of bees. He told him that he thought the millers were in the hive. They went to the hive and looked in, and it was all full of millers and their webs, and the swarm was all ruined.

This is what he told me. If there is any thing in talking to bees, I want to talk to mine before I put them out in the spring. **R. H. BAILEY.**

Ausable Forks, N. Y., Feb. 4, 1881.

It is very likely that all you say actually happened, friend B., for you might talk the same way to a great part of the hives of bees usually kept by farmers, and those who neglect them, and have it all come true. Of course, no one supposes the talking had any effect on the result, either one way or the other. The day of such superstitions has long gone by. It is the *doing* instead of the *talking*, that does the business with bees, as well as any other kind of business.

PORTULACA AS A HONEY-PLANT.

I have never noticed any thing said about portulaca as a honey-producer. It is a beautiful flowering annual, flowers opening with the rising of the sun, and bees fairly swarming on them; if they produce much honey it would be profitable to raise it, as it is as easily grown as pursley, and in this locality seeds itself. Mention it to some of your enterprising bee-keepers, and beg them to give it a trial, and report. **T. L. DAVIDSON.**

Early Branch, Hampton Co., S. C., Feb. 7, 1881.

One fall one of our girls had a beautiful bed of portulacas in a sheltered nook by the side of the building, and after all flowers were gone, and bees too, as we supposed, we had a bed of brilliant flowers covered with Italian bees, just as soon as the sun reached them in the afternoon. I have tried since to have just such a bed again; but somehow they don't seem to thrive exactly like "pursley" under my management.

ASKING QUESTIONS ON A POSTAL, ETC.

In answer to my advertisement, I begin to receive postals and letters of special inquiry. Some parties ask more questions on a postal than can be replied to on another, and it costs us 3 cents, paper, and envelopes for what, in all probability, will never be worth a cent to us. Others write a letter inclosing postal card for reply, and still others inclose 3-cent stamp for answer. **W. P. HENDERSON.**

Murfreesboro, Rutherford Co., Tenn., Feb. 7, 1881.

Gently, friend H. If your querist sends a stamp, he must use a stamped envelope to write to you; and if he sends such queries to a great many people, it will cost him a good deal of money, while if he uses a postal, it is but one cent for each of you. If they ask questions on a postal, or without inclosing a stamp, they have no right to expect more than you can write on a postal. I know that many of our friends are severely tried with us because of the brevity of our answers; but I do not know how I can well help it, if they will not bear in mind that we can not hire clerks to write *long* letters, such as they would doubtless like to get. At the same time, I think that whoever advertises in any business should expect to have questions asked, and should, in fact, be thankful to have them. Every business man should expect at least to make his business pay for postal cards, and I think we should be very careful about deciding that any sort of an inquiry, "in all probability will never be worth a cent to us." Will it not be best for us all to take these burdens cheerfully, and to decide to err on the side of doing a little more than is really our share, rather than the other way? "Do good and lend, hoping for nothing again, and great shall be your reward." I have tried this little text a good many times, and it always comes out right, many times to my great astonishment too.

ONE SWARM FOR THE LORD.

I have not lost any swarms yet, but some have got uneasy. There are about forty quarts that have come out and died. They commenced that as soon as the last of May. Some died on the bottom-board; some of them are in the cellar, and some in a dark room. I have got 46 altogether. Here is what I have done for four years. I bought 13 swarms the first of July, 1877, and only one swarm was strong enough to work in the boxes. Here is what I have done since:—

1877, 13 swarms gave	350 lbs.
1878, 13 " "	1228 "
1879, 19 " "	1810 "
1880, 32 " "	2300 "
Total	5688 "
Surplus combs	350

I have sold 14 swarms in that time. I should like to be Doolittle's neighbor one year, and if I didn't find out if bees could get honey when there was none in the flowers it would be funny.

Oh! I almost forgot. I have one swarm at work for home missions, and they made $3.00 worth of comb honey. Bless the Lord for that! Can't all of us bee-keepers set aside one swarm for the work this year, and the windows of heaven will be opened, and we will receive a blessing? If there is any one that doubts it, try it, and you will say before next fall, "Bless the Lord!" **FAYETTE LEE.**

Cokato, Wright Co., Minn., Feb. 7, 1881.

ARTIFICIAL COMB-HONEY.

Our opinion has been asked of the following, which is going the rounds of the papers:

> Some unsophisticated purchasers of honey imagine that by buying honey in the comb they are sure of getting an unadulterated article. A great mistake. There is an establishment in Boston where artificial combs—not foundations merely, but combs—are made in such perfection that it would require an expert to detect the fraud. Paraffine, not wax, is the material used. When the combs are made they are filled with an imitation honey made from glucose, worth three or four cents per pound, and flavored to taste. A hot iron is then passed over, the cells are sealed, and the "comb honey" is ready for sale.

It is, of course, a sensational scare, without a word more of truth in it than the absurd stories about our white sugar being adulterated with glucose. Newspaper editors should know better than to publish such stuff. Almost as well might the public be told that the strawberries we find in the markets are "manufactured."

WAX VERSUS WIRES, TO PREVENT FDN. SAGGING.

Honey-producers want very much fdn. made without wires so it will not sag, so we can fill up a frame and not have it bulge. Last season I tried some experiments that satisfied me that it can be done very easily. I joined strips of fdn. 1½ and 2 and 4 inches together, by lapping and pressing them together so that they would stick well, and filled frames full and put them in perpendicularly and the bees drew them out without their bulging at all. I did not see but that 4 inches wide answered just as well as that closer. Now, to prevent sagging, I would simply make it ribbed, any where from 1 to 4 inches, and make the ribs say ⅛ wide, and so they would be about 3 times as thick as the rest, and made so the impressions will run right over the ribs. My impression is, that about 2 inches will be about the right distance for the ribs. You may object to the waste of wax, thus adding to the cost; but it would not cost as much as wiring the frames, besides being much more easily done. If ribs the size I mention will not answer, larger ones will.

FOUR-FRAME EXTRACTORS, ETC.

We want an extractor that will take 4 frames and turn them inside the extractor. The turning of frames where you are taking large quantities of honey, adds very much to the labor. Can't you give us such an extractor? As my letter is not very long I will add, we want, very much, a way that every one can make his own fdn. machines. I have watched with a great deal of interest the progress made the past two years in perfecting them.

Los Gatos, Cal., Feb. 11, 1881. S. S. Butler.

Your plan for keeping fdn. from sagging, friend B., has been given in our back volumes, and works all satisfactorily. The expense of the wax, and the need of wired combs for shipping bees, are the principal objections. With one of the Foster machines you can easily put as many ribs in the fdn. as you need; but with the newly dipped sheets, I think there will be no sagging any way.—An extractor can be made, such as you describe, without trouble; but it will of a necessity be so heavy and unwieldy that you would get along faster with the ordinary kind. Extractors for four frames we have made for years, but I never have heard a favorable report from one of them.

RAPE AS A HONEY-PLANT; A BIG REPORT FROM IT.

I would like to hear the experience of bee-keepers in regard to rape as a bee feed. My bees began to work on it about the 25th of May, and it kept in bloom for about 8 weeks. After the seed got ripe it came up early in the fall, and the bees gathered honey and pollen until the 5th of November. I put one stand of bees in it the 3d of July, and they made about 200 lbs. of honey, besides helping another weak swarm. I would recommend a trial of it, especially in dry weather. A. Rater.

Monroe, Iowa, Feb. 18, 1881.

I am well aware, friend R., that rape is a great honey-plant; but with us, as I have many times explained, the little black flea makes a good crop almost impossible. I have seen a few stalks of it furnish honey in abundance, when it escapes this pest, even in our locality.

DO BEES EVER COMPLAIN WHEN OUT OF STORES?

As I was passing around my bees on the 16th of the present month, I heard quite a humming among some one of the colonies. It put me in mind of a queenless colony during the summer. When I found where the noisy colony was, I was at a loss what to do with them, as the thermometer indicated 2° below zero. I arrived at the conclusion to unpack them and ascertain the cause. I looked and found them running over their combs excitedly, but I failed to find any honey in their combs; I then gave them some nice basswood honey in one-pound sections. In a short time all was quiet as usual. I have had one other colony act the same as this one did—quieted as soon as I gave them honey; was it for want of stores, they did this way? They are in nice condition at present. Wm. Parmerlee.

Bean Blossom, Ind., Feb. 19, 1881.

I once made the remark, that if a farmer starved his pigs they would squeal, but that the poor bees had no means of making themselves heard when suffering. The above seems, however, to indicate I was at least slightly mistaken. I can offer no explanation of the matter, only that a weak colony will sometimes make a loud humming, when just about to succumb to a zero temperature; but in such a case, feeding would probably be of no avail.

HOW TO TELL THE SOURCE FROM WHICH THE HONEY COMES.

I shall want some honey labels next summer; but there is one thing I should like you to enlighten me on: How does a person always know from what source the honey comes? I have been long used to bees, and have noticed that they work on all, or nearly all, kinds of flowers that will give honey. For instance, I might label a section or package white clover, when it might have come from a dozen different flowers. I want labels giving name and address of producer, and source from which it was produced, provided I can be informed how to distinguish it.

BLACK-HEART AS A HONEY-PLANT.

Last fall at the time buckwheat was in bloom, the river bottom here was covered with a wet-weather weed. I think it is called black-heart. Some call it smartweed; it grows as high as a man's head, pink flowers as long as a person's finger. The bees seem to work on it more than the buckwheat. I had honey stored last fall, nearly as light colored as June honey, and well flavored; some hives had dark, I suppose from buckwheat; others, the light colored. Perhaps the light colored was from the black-heart. I think I live in a pretty good place for bees. I am a quarter of a mile from a good sized stream of water, well fringed with maple, elm, and willow; besides, the bottoms are pretty well supplied with wild flowers, particularly in the fall. So far, it has been a pretty hard winter on bees. I have lost none yet; most of mine are chaff-packed on summer stands, 14 colonies. Four that I took from the "brimstone" last fall, I looked at this week, and they are all right, rearing brood the same as my other colonies. I gave them sealed frames from my strong colonies. I use the 10-frame Langstroth hive. I take out the side frames of honey in the fall, and crowd the bees on just what frames they will cover nicely, from 5 to 7; put in chaff division-boards 2 inches thick, cushion on top, quilt of duck underneath; have wintered last winter, and so far this, with good results; think this will be a good test if I come through without loss.

Wm. H. Graves.

Duncan, Stark Co., Ill., Feb. 11, 1881.

You can not tell positively the source of *all* your honey; but it is a pretty easy matter to label clover and basswood correctly, both by the well-known flavor of each, and by the time of the year in which it is stored. Buckwheat we know by the color and taste both; and in the case you mention, I think you would be very safe in labeling your white fall honey black-heart, and the other buckwheat. The instance you cite shows plainly that bees seem rather to prefer to work on one kind of blossoms at a time. I too have seen one hive storing dark buckwheat honey, while the one next to it stored white honey from red clover. You will find the black-heart mentioned in our price list of seeds of honey-plants.

A GOOD REPORT FROM BUCKWHEAT.

Bees did very well here last summer, through white clover, and went into winter-quarters in very good condition, owing to a good flow of honey from buckwheat and goldenrod. I think we can thank our neighbors for sowing large fields of buckwheat, for hives were very light before this latter yield came. The winter has been very severe and steady, and bees have not had a good fly for about two months, until within a few days, when it has been warmer, and they have had a chance to get out and limber up a little.

DO BEES FREEZE?

Quite a good many swarms have frozen to death this winter. I know that some believe that bees do not freeze; but it seems to be the case here, for I have seen them *dead*, frozen to death, fast to the sealed honey. I commenced the winter with six swarms, and have lost only one yet. The rest seem in good condition. They are in the 8-frame story and half Gallup hive; there are no chaff hives used around here. I packed mine in oat straw, leaving the front open. As I am only a beginner in the bee business, I did not have very good success last year. I increased from 2 swarms to 6 by buying 2, and took only about 85 lbs. of comb honey.

PAPER AND WOOD SEPARATORS.

Why will not common pasteboard do for separators as well as any thing in the paper line? or would they warp out of shape by getting damp in the hive? I used wood separators last year, but the way the bees plastered the propolis on to them was a caution to wood separators, and I shall have some tall scraping to do to clean them for use this season.

J. C. HITCHCOCK.

Hoag's Corners, Rens. Co., N. Y., Feb. 17, 1881.

I do not think a good strong colony of bees, properly protected in old tough combs, will ever freeze, though the weather be as low as 40° below zero.—You have given the objections to paper separators; but besides that, bees will often set to work and gnaw pasteboard, spoiling the separators, besides wasting their time. Nothing seems to answer in place of tin, especially in regard to the propolis accumulations. The bees evidently seem to think the tin is as smooth as they can make it by varnishing, and so let it alone.

RAPE FOR BEES.

Having four acres of fall wheat I hurried it off, and there being lots of rain I plowed and sowed about 2 lbs. per acre, broadcast, at two different times, a week apart. It came up in a hurry, and in about forty days became a perfect sea of yellow bloom; and if Novice had only seen the beautiful Italians going for that rape patch he would have smiled—yes, he would. But although they worked hard and gathered lots of pollen yet they did not increase their stores of honey much; yet I have no doubt but it helped them a great deal toward making a living, and kept them out of mischief, and did a great deal toward helping them to increase from 8 colonies in the spring to 22 in the fall; and at this time, Feb. 16, they look as if they would live to hum next summer; and taken all together, I am well pleased with it; besides, it kept the Canada thistles in subjection.

H. SMITH.

New Hamburg, Ontario, Canada.

FRIEND B.'S DILEMMA.

In your price list you say, "Don't get in debt." Now, that advice came too late, as I am in debt, and I wish you would give me some advice that will get me out, this very year. This is what I want to know: I want 50 hives this year, and I have not one dollar to buy them with, and have to wait until some honey is sold this year, and then it will be too late in the season for them. Is there any way that I can keep them from leaving, as I have nothing for a house for them?

CHARLES R. BALLOW.

Half Moon Bay, Cal , Feb. 2, 1881.

All right, friend B. Stop using tobacco, as you have promised to do on page 144; stop every thing else that is useless, and hoard up the pennies like a miser. Stop doing every thing that you know is wrong, or even useless. Tell God you are going to be obedient to him in every thing, just as faithfully as you know how, and that you are going to depend on him for help, right straight through. Work every minute; work like a tiger; don't stop to fuss or waste your time, for any thing or anybody. Go to meeting and Sunday-school on Sunday, and work as hard for the Lord as you do for yourself on week days. If there are no churches or Sunday-schools near you, start one or both. If you can do no more, get a few of your friends around you, and read the Bible to them, and other good books. I will furnish the books if you will undertake it. Now for the bees: You must try to buy or make frames enough, of some cheap kind, to have your combs all built in frames. Well, as it never rains in California in the summer, you can hang these frames on sticks supported by stakes driven in the ground, and cover the whole with some kind of cheap cloth. Make the cover like a sort of bag, and bank dirt or sawdust over the lower edges, to keep robbers away, and I think you will get along very well until you sell honey enough to buy some hives, and then all you have to do is to hang your frames in the hives, before winter comes. I have used hives with nothing but the ground for a bottom-board, and they did very well during the summer. I have also used only a cloth cover over the frames, in the house apiary. Now, mind, you are not to let a swarm go off, and you are to report regularly every month, until the end of the season. You see, friend B., if you come out all right, there are hundreds of others who are ready to follow; and, therefore, you must not fail. Now look out how you spend your Sundays.

Juvenile Department.

I AM a little girl 11 years old. My uncle takes GLEANINGS, and I like to read it. I would not know how to do without it. My uncle has 20 colonies of bees; they are almost all black ones; the remainder are Italians. He keeps his bees in the cellar, 19 of them, and one in a chaff hive. My uncle's name is D. M. Welch. I have a swarm; it is in a patent hive, and I would like to have it in a 1½ story hive. Could you tell me how to do it? I go to two Sunday-schools. I like to read the library books. I would like to get a letter from Blue Eyes. I like bees, but I like honey better still; I like buckwheat honey better than clover honey, but our bees made boneset honey last summer. It was so bitter that we could not eat it. I used to think that honey was always sweet; but that was bitter. Did you ever taste any like that? Aunt Mardie has six colonies. She buries hers up in the snow-drift, and digs them out when it thaws. She has kept them that way for 2 years, and they are always all right when spring comes. I like the cartoons, and uncle Dan likes Our Homes. JENNIE SCHERMERHORN.

Curwinsville, Pa., Feb. 14, 1881.

Many thanks, Jennie. I have just told "Stella" to send you a nice book for your letter. I think I will tell her to send you "Silver Keys," for I have just read it, and I like it *ever so much*. See if you do not feel sorry for poor Mrs. Sands, when she was trying so hard to do right, when everybody accused her of stealing the funny gold piece. I have seen some honey that was bitter a little, but I guess it was not as bad as that you had. Give my best wishes to aunt Mardie and uncle Dan. How do you like the cartoon this month? Tell uncle Dan that I said he must put your bees into a better hive for you.

I think the reason of bees making dark honey is the neglect of the bee-keeper. He just lets the hive go, and does not look into it, so that the hive gets dirty inside; and when the bees gather honey and fill the little holes in the comb, the comb and honey get dirty too; so this is what I think makes dark honey. I am eleven years old.

MABEL L. NELSON.

Wyandotte, Kansas, Feb. 8, 1881.

I fear, friend Mabel, you hardly give the bees credit enough; they are usually the most scrupulously neat in their house-keeping, and even if their combs are old and dark, they have them scrubbed and scraped so that they would hardly make the honey dark, if I am correct. Get your papa to let you see them some time, when they are "cleaning house." I am glad, however, you are studying in regard to these things, and so we send you a book too.

As papa has not sent in his reports of his bees, I thought I would write and tell you about them. He has 19 in the cellar, and one chaff hive. I have 4 of my own. They are in good order. I am 11 years old. I love to go to Sunday-school. I go every Sunday. My mother is superintendent of our school. My papa is D. M. Welch. He has taken GLEANINGS 6 or 8 years. He thinks he couldn't do without it. Mother thinks the Home Papers are splendid. I like the cartoons, for I have to laugh when I see any one running from bees. They don't sting me.

CHARLIE WELCH.

Curwinsville, Clearfield Co., Pa., Feb. 19, 1881.

Why, that is a tip-top letter, Charlie. Give my best respects to your father and mother, and thank them for their good opinions. With such a father and mother, I can not really see how you can help growing up a good boy. We send you a book for your letter too; tell us how you like it when you write again. I suppose Jennie is your cousin.

My bees are gone where the woodbine twineth, but you must not put me in with the Blasted Hopers. Papa's bees are all dead; they all died with the cholera. When it got warm enough to open them we found them dead and all daubed over with their filth, with plenty of honey in the hives. I have not given up yet. I will keep bees and will try until I learn to keep them safely. Papa has sent to the South for some bees. There are only a few bees left in this county. When we make candy for our bees we spread a paper in the dish and pour the candy in on the paper. It comes out nice, and the paper sticks to the candy, and we put it in the hives with the paper up, and press the covers down tight. Try this and see if you do not like it. Our bees were out, what were alive, January 30th. They had a good fly. It has been raining three days and nights. The rivers are getting high. Papa sends you money for GLEANINGS; we can not do without it. I like to read all the papers. We take four of them.

FREDDIE L. CRAYCRAFT.

Salem, Wash. Co., Ind., Feb. 9, 1881.

Very good, Freddie. I am glad you do not want to be among the Blasted Hopers, and I am glad, too, that you like to read the papers. Tell us how you like the book we send you this time.

Reports Encouraging.

OUR bees, 90 swarms, all right thus far, on their summer stands, with chaff cushions in the cap. We protected them by banking up on three sides (leaving the front open), with straw and coarse litter from the horse stable. For the past two months we have had plenty of snow, so the brood-chamber has been protected from the severe cold. Bees had a purifying flight on the 9th of Feb. White clover all right under the snow.

MRS. L. HARRISON.

Peoria, Ill., Feb. 12, 1881.

Well done, well done, Mrs. H. I am sure I shall never say again that women can not keep bees. Why, we have had such a dismal string of reports from Blasted Hopers for the past few weeks that I had thought seriously of advertising for the names of a few, if there were any such, who had not lost all their bees. You see, I wanted to have these few names to hold the A B C class up, for fear they would all get demoralized and put off in one vast stampede. Ninety colonies, and all, all right, out west on the prairies on their summer stands, and only a woman—beg pardon, my friend; you know I was just saying what others say, in that concluding remark. Now, there is one more bit of comfort in your report. You saved your bees (like a sensible woman) by protecting them with litter from the horse stables; and that old experiment of mine, where I bought 40 loads, was not faulty in theory, but simply in practice; I had not yet got the hang of it.

Notes and Queries.

COTTON SEED FOR WINTER PACKING, ETC.

THE elm is in bloom. Queens are laying nicely. Lost one colony during winter. Those packed in cotton seed are all in the best condition. Hurrah for cotton seed! it is *the* thing for hive packing; it will not mold if it gets a little damp. The busy season is upon us. Oats are being put in the ground in a hurry. Corn-planting will commence in ten days. B. F. CARROLL.

Dresden, Navarro Co., Texas, Feb. 5, 1881.

Bees in cellar all quiet and right thus far.

Colerain, Mass., Feb. 7, '81. WM. W. CARY.

WHICH IS THE BEST SMOKER?

I have used the Quinby, the Bingham, and your smokers; and for all purposes I like the large-size new Quinby smoker best. J. G. MARTIN.

Reidenbach's Store, Lan. Co., Pa., Feb. 7, 1881.

In reply to Mr. E. Cadwell about smokers, I will say I have tried hot-blast smokers, but they send down sparks, and are liable to set the hive on fire, and are so hot that you can not bare your hand in the smoke. I used one, and I did not like it; so I sent for a Simplicity smoker, and there is none made to beat it. First, it does not blow hot smoke; second, it gives more smoke than any other smoker; in fact, it is the best smoker in the market.

West Woodstock, Ct., Feb., 1881. A. S. MYERS.

We are losing our bees in this section, with what seems to be dysentery. I am feeding mine candy. They seem better. Hope to save some of them. D. B. BUZICK.

Ashland, Saunders Co., Neb., Jan. 31, 1881.

DIPPING FOUNDATION.

I think I have got up a dipping machine that is a success. I sent and got a Faris machine, but mine beats it. I have used mine two years, but have improved on it. GEO. W. PENN.

Colfax, Iowa, Jan. 24, 1881.

CELLAR WINTERING.

My bees, 100 swarms, seem to be doing well in the cellar, and with our steady cold weather I can't see how they would be better off out of doors in chaff. Winter set in about Nov. 11th, and no days since, warm enough for bees to fly. L. BECKWITH.

Berlin, Green Lake Co., Wis., Feb. 4, 1881.

CALIFORNIA.

Bees have been working briskly on willow ever since Christmas. I have had some seven-top turnip in bloom since New Year's; will send you some blooms. If some of you had the pollen that my Italians have gathered, and could spare, you would not think of flour as feed. JOHN S. KING.

San Jose, Santa Clara Co., Cal., Jan. 28, 1881.

WILD CUCUMBER, ETC.

Last year was not a good year with us; but by moving part of mine out they did very well. I increased from 81 to 165 colonies, and sold $85 worth of honey. We have a honey-plant here I never heard you mention. We call it wild cucumber; it grows abundantly on the bottom, and bees gather from it extensively. It will do well on any soil.

Peru, Ill., Feb. 7, 1881. H. S. HACKMAN.

FRIEND MUTH AND HIS VICINITY.

Examined 26 of my colonies, and found them in first-class condition. One of them was rather weak, but will pull through. Some had brood in all stages. Weather would not permit me to finish my examination. From the reports I hear, I have reason to believe that 75 per cent of all the bees in Ohio and Indiana are winter-killed. CHAS. F. MUTH.

Cincinnati, O., Feb. 11, 1881.

NOT IN BLASTED HOPES AFTER ALL.

Notwithstanding you pushed me into Blasted Hopes last summer without my permission, we still survive, having about finished selling the heaviest crop of fall honey we ever had gathered, and prospects for the future are at present encouraging, provided our pets get through this extremely cold winter in good shape. CHAS. H. RUE.

Manalapan, Mon. Co., N. J., Jan. 18, 1881.

ROBBING, HOW TO STOP.

Simply fold a wet rag, and regulate the entrance according to the extent of the robbing.

Peru, Ill., Feb. 9, 1881. H. S. HACKMAN.

[Thanks, friend H.; but I believe the above has been substantially given in our back No's. A wet cloth, or wet grass, seems to have the effect of at least discouraging and repelling robbers, when placed near the entrance.]

GOOD NEWS FROM MR. LANGSTROTH.

Dear Brother Root:—It has pleased the kind Father to restore me to health; and, excepting the increasing infirmities of age (I was 70 last Christmas), I am in most respects as well as I have been for many years. L. L. LANGSTROTH.

Oxford, O., Feb. 13, 1881.

[Knowing how deeply you all are interested in any word from our friend and benefactor Mr. L., I take the liberty of giving the above brief note.]

THE FOUL-BROOD QUESTION IN MICHIGAN.

Several bee-keepers in this vicinity are considering the feasibility of holding a convention in Detroit this spring. The question of foul brood is demanding attention, and the efficiency of the law about to be passed in our State in regard to it depends on the activity of bee-keepers. Will those who favor the enterprise please send me their names? A. B. WEED.

75 Bagg St., Detroit, Mich., Feb. 18, 1881.

How are bees wintering? Mine are wintering very poorly. I have over 40 swarms in cellar. Bees have not had a day they could fly since Nov. 6. WILLIAM VANAUKEN.

Woodville, Jeff. Co., N. Y., Jan. 21, 1881.

[Ours, at this date (Feb. 8th), are in pretty fair condition, except the ones in the house apiary. Of those out of doors, we have lost about 5 per cent, and the worst part of it is, this 5 per cent includes two Holy-Land queens and one Cyprian. One of the Holy Land queens had what we called the best colony of bees in the apiary, and the best supplied with stores. They seemed to have dysentery, for their well-filled combs were pretty badly daubed.]

VIALLON'S CANDY FOR QUEEN-CAGES WITHOUT WATER.

The last queen bee you sent me came in splendid order. The cage had no bottle of water in it, as you well remember. You sent me three, and they got all wet with the water in the cage, and one of them died. The one you sent instead came in good order, and started laying in a few days, and had a nice bit of young brood in the hive. JAS. ANDERSON.

Caledon, Ont., Can., Jan. 20, 1881.

HONEY FOR SORE EYES.

A neighbor of mine had inflammation in his eyes. He tried many things of many physicians; "was nothing bettered, but rather grew worse," until he was almost entirely blind. His family was sick, and I presented him with a pail of honey. What they did not eat he put in his eyes, a drop or two in each eye, two or three times a day. In three months' time he was able to read coarse print, and now, after four months' use, his eyes are almost as good as ever. I have also found honey very good for common cold-sore eyes. S. C. PERRY.

Portland, Ionia Co., Mich., Feb. 18, 1881.

THIRTY-SIX SWARMS FROM ONE IN EIGHT MONTHS.

I had 1 swarm last spring; I now have 5, and have extracted 50 lbs. of honey. I had, however, some extra comb to help me. But this is nothing. Two years ago, Mr. Archer, of Santa Barbara, made 36 swarms from 1 in 8 months, besides extracting about (I forget the exact figures) 1500 lbs. of honey. I am acquainted with Mr. Archer, and do not doubt the statement. But it is not all rosy in California. Some seasons we come out with half the number of bees we start in with, and no honey at all. Again, in good seasons the price is so low there is no profit.

Santa Barbara, Cal., Feb. 9, 1881. S. P. SNOW.

CHINESE TEA-PLANT AS A HONEY-PLANT.

If bee-keepers will get the report of the Department of Agriculture for the year 1877, they will find that the "Chinese tea-plant" is spoken of as a valuable honey-plant. Can not they do a good thing for themselves and the country too by disseminating it throughout the land? The plant is nearly as hardy as the peach-tree; can be propagated by cuttings, and is easily cultivated. There are a good many trees in the Southern States, and cuttings ought not to be difficult to get. WILLIAM HARWOOD.

Newberg, Cass Co., Mich., Feb. 12, 1881.

[If the tea-plant can be grown as easily as you say, friend H., it will be a matter of great surprise to us, as we have not heard of any experiments with it beyond the State of California. Can any one tell us about this matter, and also about the honey-producing properties of the tea-plant?]

TOBACCO COLUMN.

HOW IT STARTED.

I SEE by Feb. No. of GLEANINGS that a few careless words of mine [see p. 493, Oct. No.] are likely to cost you quite a number of smokers. I am not able to give away smokers, but would like, through GLEANINGS, to give all who are trying to quit the use of tobacco, a word of advice and a word of comfort; and perhaps the best way is to give a little of my own experience. My mother used to tell me that I was taught to smoke when about two years old, and that my father taught me. I can not remember the time when I did not like to smoke, better than to eat. I am now 46 years old, and, as nearly as I can estimate, smoking has cost me about *eighteen hundred dollars*, and I think no man ever had the smoking habit more firmly fixed than I did. Three years ago I began to think of the awful waste of time and money that I was guilty of, and to want to reform in this respect, as I had long before done with regard to drink; but all my friends (those who were working side by side with me in the cause of temperance) told me that it was no use for me to try to break myself of this awful habit. Finally I began to look upon the use of tobacco, not as a habit, but as an awful sin in the sight of God. With these thoughts in my mind I went to bed one night, but not to sleep. I lay awake and thought of my condition until about two o'clock in the morning, when all at once these words came into my mind: "Take it to the Lord in prayer." I got out of bed and got down on my knees, and there in the darkness, and with none but God to hear, I asked for strength to overcome the awful habit of smoking, to which for forty years I had been a slave. I thus wrestled with God for about two hours, when I arose from my knees, conscious that I had gained the greatest victory of my life. The next day I worked all day in the shop by the side of a man who smoked all the time, but with no desire on my part to smoke at all.

This letter is now too long. At some future time I will tell of the many, who, under God, have quit tobacco through my influence, and I want you all to remember that one who knows the power of prayer prays every night for all who are trying to leave off the awful habit of smoking. HENRY M. SMITH.

Frankfort, Mich., Feb. 10, 1881.

Do not, I pray you, friend S., call the words careless, for I am sure it was God who prompted you to write them. Do you not see the good that is coming from it? Never fear about the cost of the smokers; God will take care of that too.

Having seen your offer to tobacco chewers in GLEANINGS, I accept the offer of a smoker. Send me one of Bingham's cold-blast, large size, and away goes tobacco-box and all. Our bees are apparently doing well. We have 10 colonies. We have had quite a thaw. Bees flew very lively.

W. R. TRUSSEL.

Colby, Montcalm Co., Mich., Feb 10, 1881.

Now I will take that smoker, you bet. As I have to smoke fifty cents' worth of tobacco in one day, you can have some idea how nice I must feel at night, as I never could get used to getting along without it. But I will take that smoker all the same, as you say you will make every tobacco user a present of one of your best smokers, he to have his choice, if he will agree to give up tobacco. If I don't use tobacco, I don't know what you would call it; but I can use corn-cobs in your Simplicity cold-blast smoker, and if I use tobacco again for the love of the weed, you may shoot me. CHAS. R. BALLOW.

Half Moon Bay, Cal., Feb. 2, 1881.

It occurs to me, friend B., that tobacco must be very high in California, or else you have been using a great deal. I commend your good resolves, and your energy; but, my friend, you will have a terribly hard pull unless you trust God to help you in the matter. Remember that we are praying for you, and that you can hardly expect God to help you to get out of debt while you waste money on tobacco. [See page 141.]

Our Homes.

And we declare unto you glad tidings.—ACTS 13:32.

I HAVE for many days looked forward to the time, dear friends, when I should come before you, as I do now this morning, and it is because I have something to tell you. Please think over, if you will, each one of you, and fix your minds on what would, in your opinion, make you happiest, just now. What would be the gladdest tidings that you can think of? As in my mind's eye I scan you in your different homes, I fall to wondering what are the great wants of the little army of those who read these Home Papers monthly. Some of you, doubtless, would be made happiest by having something to do; others, by having better pay for their labor; still others, by having a little less to do; some of you, by receiving the money for the work you have done; still others, and many, doubtless, by having good health, and the ability to earn honest, fair day's wages. Many of you are doubtless in pain, and I fear, too, that not a few are suffering mental agony for sins that are past, or from sins that hold you in bondage. Besides all these, there are a great many, I am sure, who are discontented without any apparent reason. Is life unsatisfactory? I once heard a man say that, in his opinion, life costs all it is worth, and a little more. Will it be saying too much if I declare I have glad tidings for you all? Yes, all; all I have mentioned, and to every one else who is in sorrow, or suffering from any cause whatever, or who has wants and needs that conduce to make them unhappy. Have I put it too strongly?

Come unto me, all *ye* that labor and are heavy laden, and I will give you rest. Take my yoke upon you, and learn of me; for I am meek and lowly in heart; and ye shall find rest unto your souls. For my yoke *is* easy, and my burden is light.—
MATT. 11:28—30.

There is certainly no trouble with the promise in the little text; the only trouble is, that we will not accept that yoke. Is it a yoke? Yes, it is, but not a hundredth part as grievous a one as the yokes I have pictured above; in fact, when you once get it adjusted, it is truly easy, and the burden is light. Nay, more; it is a real, positive pleasure to bear it; and methinks I have heard of people who shouted for joy, or at least felt like doing so, because of the privilege of bearing this burden. I wonder if I can not make it plain.

You have a little one at home in its crib. It has been out during these spring days, and, forgetting the cool March air (and mamma's injunction) during the bright new sunshine has thrown off its wrappings and caught cold. As you come home at night, the poor helpless little one is moaning with the ear-ache. It has transgressed, and is now suffering the consequences. You bend over and kiss the little soft tear-stained cheek; remedies are applied, but to no avail. You, its father and mother, are powerless, at least for the time. While your hearts are wrung with anguish at the suffering of the poor little helpless one, has the thought never occurred to you,—in fact, have you never *said* to the poor little sufferer, "Papa would gladly, oh so gladly! bear the pain for you, my precious, if he could"? Well, suppose this were possible, and that you could take it all yourself, and see the little one's smile for joy at being relieved from pain. Would you grumble at the pain when it came? To be sure, not. You would, right in the midst of its severest twinges, say, "Thank God! thank God! my darling is spared;" and I am not sure but that a peace and joy would shine from your face, even though the intense pain brought tears to your eyes. Now, please just hold on to one point I have made clear to you. It is this: there is a possibility of being happy and thankful, yes, even joyous, amid severe bodily pain. There may be fathers (but I am sure none whose eyes are on these pages) who would refuse to accept the pain, preferring to let the little one bear it. I have no glad tidings for such a one, or at least none so long as they hold to that attitude. They decline the yoke that Christ has spoken of.

Well, if all the trials in life were as plain and simple as the above little incident; if, in fact, you could see and understand just how all you are called upon to bear were for your own good, or for some loved one's good, there would be, at least so it seems to us, little trouble in saying, right along through all the trials and wants I have spoken of, "Not my will, but thine, be done." But before I enlarge on this point of submission, as it is my purpose to do, I wish you to clearly distinguish between submission in a hopeful way, and submission in a discouraged way. If you are out of work, you are by no manner of means to suppose it is God's will you should be a burden on your friends and society, and so sit down and give up; but you are to submit to the greater trial, perhaps, of going out through the storm, buffeting the elements, and possibly unkind words too, from those to whom you apply, because, without question, it is God's will that you should submit to this, as the first and most apparent duty. With it should also be a willingness to accept of whatever position will enable you to turn an honest penny, even though the wages be but small, accepting whatever your fellow-men may be inclined to offer, as an evidence that it is God's will that you should, at least for the present, have no better place or better wages. Ask him to open your eyes and brighten your intellect, then plunge fearlessly into the duties of life and living. Accept the situation of affairs as it is, but resolve within yourself that, by his help, you will make yourself of such value that *you* will be sought for instead of having to seek places all your life. Now keeping this in view, I wish to quote from the little book, "The Christian's Secret of a Happy Life," that I mentioned last month. I have selected a passage to bring out what it is to trust in God; but, mind you, during all this trust you are supposed to be working hard with both mind and body, day by day, and to be in no sort of sense, dead or idle. I quote from p. 16:—

Suppose I were to be describing to a person who was entirely ignorant of the subject, the way in which a lump of clay is made into a beautiful vessel. I tell him first the part of the clay in the matter, and all I can say about this is, that the clay is put into the potter's hands, and then it lies passive there, submitting itself to all the turnings and overturnings of the potter's hands upon it. There is really nothing else to be said about the clay's part. But could my hearer argue from this that nothing else is done, because I say that this is all the clay can do? If he is an intelligent hearer he will not dream of doing so, but will say, "I understand. This is what the clay must do; but what must the potter do?" "Ah," I answer, "now we come to the important part. The potter takes the clay thus abandoned to his working, and begins to mold and fashion it according to his own will. He kneads and works it; he tears it apart and presses it together again; he wets it and then suffers it to dry. Sometimes he works at it for hours together; sometimes he lays it aside for days, and does not touch it. And then, when by all these processes he has made it perfectly pliable in his hands, he proceeds to make it up into the vessel he has purposed. He turns it upon the wheel, planes it and smoothes it, and dries it in the sun, bakes it in the oven, and finally turns it out of his workshop a vessel to his honor and fit for his use."

Once more, p. 31:—

Most Christians are like a man who was toiling along the road, bending under a heavy burden, when a wagon overtook him, and the driver kindly offered to help him on his journey. He joyfully accepted the offer, but when seated continued to bend beneath his burden, which he still kept on his shoulders. "Why do you not lay down your burden?" asked the kind-hearted driver. "Oh!" replied the man, "I feel that it is almost too much to ask you to carry me, and I could not think of letting you carry my burden too." And so Christians who have given themselves into the care and keeping of the Lord Jesus, still continue to bend beneath the weight of their burden, and often go weary and heavy-laden throughout the whole length of their journey.

When I speak of burdens, I mean everything that troubles us, whether spiritual or temporal.

I mean first of all ourselves. The greatest burden we have to carry in life is self. The most difficult thing we have to manage is self. Our own daily living, our frames and feelings, and our especial weaknesses and temptations, and our peculiar temperaments,—our inward affairs of every kind—these are the things that perplex and worry us more than any thing else, and that bring us oftenest into bondage and darkness. In laying off your burdens, therefore, the first one you must get rid of is yourself. You must hand yourself and all your inward experience, your temptations, your temperament, your frames, and feelings, all into the care and keeping of your God, and leave them there. He made you, and therefore he understands you, and knows how to manage you, and you must trust him to do it. Say to him, "Here, Lord, I abandon myself to thee. I have tried in every way I could think of to manage myself, and to make myself what I know I ought to be, but have always failed. Now I give it up to thee. Do thou take entire possession of me. Work in me all the good pleasure of thy will. Mold and fashion me into such a vessel as seemeth good to thee. I leave myself in thy hands, and I believe thou wilt, according to thy promise, make me into a vessel unto thine honor, 'sanctified, and meet for the Master's use, and prepared unto every good work.'" And here you must rest, trusting yourself thus to him continually and absolutely.

And again, p. 35:—

Do you recollect the delicious sense of rest with which you have sometimes gone to bed at night, after a day of great exertion and weariness? How delightful was the sensation of relaxing every muscle, and letting your body go in a perfect abandonment of ease and comfort! The strain of the day had ceased for a few hours at least, and the work of the day had been laid off. You no longer had to hold up an aching head or a weary back. You trusted yourself to the bed in an absolute confidence, and it held you up, without effort or strain, or even thought on your part. You rested!

But suppose you had doubted the strength or the stability of your bed, and had expected each moment to find it giving way beneath you and landing you on the floor; could you have rested then? Would not every muscle have been strained in a fruitless effort to hold yourself up; and would not the weariness have been greater than not to have gone to bed at all?

And still again, p. 37:—

Who is the best cared for in every household? Is it not the little children? And does not the least of all, the helpless little baby, receive the largest share? As a late writer has said, the baby "toils not, neither does he spin; and yet he is fed and clothed and loved and rejoiced in," and none so much as he.

This life of faith, then, about which I am writing, consists in just this: being a child in the Father's house. And when this is said, enough is said to transform every weary, burdened life into one of blessedness and rest.

Let the ways of childish confidence and freedom and care which so please you and win your hearts in your own little ones, teach you what should be your ways with God; and leaving yourselves in his hands, learn to be literally careful for nothing, and you shall find it to be a fact that "the peace of God which passeth all understanding shall keep (as in a garrison) your hearts through Christ Jesus."

"Trust in the Lord and do good; so shalt thou dwell in the land, and verily thou shalt be fed.

"Delight thyself also in the Lord, and he shall give thee the desires of thine heart.

"Commit thy way unto the Lord; trust also in him, and he shall bring it to pass:

"And he shall bring forth thy righteousness as the light, and thy judgment as the noon-day.

"Rest in the Lord, and wait patiently for him.

"And the work of righteousness shall be peace; and the effect of righteousness, quietness and assurance for ever.

"And my people shall dwell in a peaceable habitation, and in sure dwellings, and in quiet resting-places."

Now a few words about how we shall start in this happy Christian life. I will quote again, p. 42:—

A great many Christians actually seem to think that all their Father in heaven wants is a chance to make them miserable, and to take all their blessings; and they imagine, poor souls! that if they hold on to things in their own will they can hinder him from doing this. I am ashamed to write the words, and yet we must face a fact which is making wretched hundreds of lives.

A Christian lady who had this feeling was once expressing to a friend how impossible she found it to say, "Thy will be done," and how afraid she should be to do it. She was the mother of one only little boy, who was the heir to a great fortune, and the idol of her heart. After she had stated her difficul-

> ties fully, her friend said, "Suppose your little Charley should come running to you to-morrow and say, 'Mother, I have made up my mind to let you have your own way with me from this time forward. I am always going to obey you, and I want you to do just whatever you think best with me. I know you love me, and I am going to trust myself to your love.' How would you feel toward him? Would you say to yourself, 'Ah, now I shall have a chance to make Charley miserable; I will take away all his pleasures, and fill his life with every hard and disagreeable thing I can find; I will compel him to do just the things that are the most difficult for him to do, and will give him all sorts of impossible commands'?" "Oh, no, no, no!" exclaimed the indignant mother; "you know I would not. You know I would hug him to my heart, and cover him with kisses, and would hasten to fill his life with all that was sweetest and best." "And are you more tender and loving than God?" asked her friend. "Ah, no," was the reply; "I see my mistake, and I will not be any more afraid of saying, 'Thy will be done,' to my heavenly Father, than I would want my Charley to be of saying it to me."

Of course, I have skipped a great deal that I would have been glad to give, had it not been for want of space; but I am almost sure after giving you thus much, that you have the same feeling with myself, that this kind writer, whom I know only as "H. W. S.," would go still further and tell us all exactly what to do—even the very words we should utter in giving ourselves fully up to the kind care and guidance of the great Father who made us in such infinite love. I had been praying for many weeks for more light on this very matter, and for very plain directions as to what was my duty, that I might grow and rise above some of the sore temptations that I am sure mar my Christian work and my Christian usefulness. Chief among them is my great temptation to uncharitableness, as I have often spoken of before. Well, this book seemed so perfectly to cover the whole subject that I felt truly God had sent it, and that he had raised up this kind woman to lead a multitude of sinners, who were stumbling with the cares of this world. Well, in view of this you can probably imagine with what joy I hailed the following, which I found at the close of one of the chapters:—

> A lady, now very eminent in this life of trust, when she was seeking in great darkness and perplexity to enter in, said to the friend who was trying to help her, "You all say abandon yourself and trust—abandon yourself and trust—but I do not know how. I wish you would just do it out loud so I may see how you do it."
>
> Shall I do it out loud for you?
>
> "Lord Jesus! I believe that thou art able and willing to deliver me from all care, and unrest, and bondage of my Christian life. I believe thou didst die to set me free, not only in the future, but now and here. I believe thou art stronger than Satan, and that thou canst keep me, even me, in my extreme of weakness, from falling into his snares, or yielding obedience to his commands. And, Lord, I am going to trust thee to keep me. I have tried keeping myself, and have failed, and failed most grievously. I am absolutely helpless. So now I will trust thee. I give myself to thee. I keep back no reserves. Body, soul, and spirit, I present myself to thee, a worthless lump of clay, to be made into any thing thy love and thy wisdom shall choose. And now, I *am* thine. I believe thou dost accept that which I present to thee; I believe that this poor, weak foolish heart has been taken possession of by thee, and that thou hast even at this very moment begun to work in me to will and to do of thy good pleasure. I trust thee utterly, and I trust thee now!"
>
> Are you afraid to take this step? Does it seem too sudden, too much like a leap in the dark? Do you not know that the steps of faith always "fall on the seeming void, but find the rock beneath?" If ever you are to enter this glorious land flowing with milk and honey, you must sooner or later step into the brimming waters, for there is no other path. And to do it now, may save you months and even years of disappointment and grief. Hear the word of the Lord,—
>
> "Have not I commanded thee! Be strong and of good courage; be not afraid, neither be thou dismayed: for the Lord thy God is with thee whithersoever thou goest."

Again, in another part of the book, I find this:—

> To sum it up, then, what is needed for happy and effectual service is simply to put your work into the Lord's hands, and leave it there. Do not take it to him in prayer saying, "Lord, guide me, Lord give me wisdom, Lord arrange for me," and then arise from your knees, and take the burden all back, and try to guide and arrange for yourself. *Leave* it with the Lord; and remember that what you trust to him you must not worry over nor feel anxious about. Trust and worry can not go together. If your work is a burden, it is because you are not trusting it to him. But if you do trust it to him, you will surely find that the yoke he puts upon you is easy, and the burden he gives you to carry is light, and even in the midst of a life of ceaseless activity you shall find rest to your soul.

"If your work is a burden, it is because you are not trusting him." This has been ringing in my ears, as it were, since I commenced reading the book. Visitors, after going over our factory and premises, often turn round and say, "Why, Mr. Root, how is it possible that you can stand it, to look after and supervise so many different trades and industries, without being worried to death?" My reply is that it don't worry me, because I do not worry about it; but it is not always that I have been able to carry my cares and "worries" to that great strong Friend and leave them there, as our friend so aptly expresses it; there is a lack of faith and trust that almost constantly stands in the way of this new and happy life, and yet no one ever gave the Bible teachings in this matter a fair test and found them wanting. I have read the book to a great many friends, and it has been a surprise to me to see how many there are who, although they almost hold their breath as they catch views of a deliverance from the burdens of this life, turn back with a sigh, and refuse to accept Bible teachings in any such way as this. It is too good to be true, they say, by actions, if not words. We have got to stand up for our rights in this world, and we have got to take care, worry, and darkness, when God sees fit to send them.

When I was a boy, I used to go in swimming almost every day in the summer time, and, although we had beautiful ponds of clear soft water, the gravelly bottoms to walk and play on, I never learned to swim. The rest swam all about me, and told me how, and tried in vain to get me to do as they did, and trust to the water to bear me up; but summer after summer passed in the same way, and I could not muster up the courage to take my feet right off the bottom, and launch out as they did. I would do it almost; but unless I could have at least one toe on the ground, I was afraid I would sink. Finally, one day, I was persuaded so much that I said, "All right; I will sink then." I pushed out boldly, and raised both feet clear from the bottom; but, to my great surprise and astonishment, I did not sink at all, but in one minute, almost, I sailed off like a bird, and have always been able to swim since then. I simply trusted the water. It is exactly in the same way, my friends, that we are to trust God. Cut clear loose from self and selfishness, and trust to that gentle Spirit to rule in and through you, and to do all that needs to be done. The particular point that this book brings out is, that inasmuch as wrong actions are the result of wrong thoughts, and thoughts of a wrong attitude of the mind, the surest way of forestalling both is to make God an indweller, as it were, of our inner selves, and then none of these sins and acts that give ourselves and others so much pain would ever have a starting-point at all. To illustrate: Suppose I have a boy in my employ who is exceedingly heedless and forgetful. Over and over again I tell him to attend to some important duty, but he forgets it. Finally I tell him some morning, that I wish him to attend to this duty right now, before he forgets it, and he as usual promises to do it right away; but. before he gets started to do it, he forgets it again, and I find out, a couple of hours after, it is still undone. If I should decide that forbearance had ceased to be a virtue, and discharged him peremptorily, the greater part of the world would say I had served him right, and he had no right to expect any thing more. Or suppose I should, under the annoyance of finding he had not touched the work, break out something like this:—

"Look here, Z.! you go and do that work, or let somebody else take your place; I beg to have you understand, sir, that when *I* tell you to do a thing, I mean it. Now, let this be the *last* time I have to tell you more than *once*. Do you UNDERSTAND?"

You see, I started out to be mild; but as I "got going," my tone waxed harder and harder, until the last word was about as harsh and rough as one could well speak. Well, I would try to think it was just what he deserved, any way, and that it was for his own good that I made him "toe the mark;" but as the hours passed I began slowly to repent. Pretty soon I remembered that it was only a few days ago that I had exhorted this boy to accept the Lord Jesus Christ for his savior, and carry all his cares and troubles to him. The hour of our noon service approaches, and as in fancy I see his troubled face among the rest of the boys and girls who come up to hear me read and pray for them, the feeling is awful. I feel as if I could never open the Bible again. The awful inconsistency of my position, even in his eyes alone, for no one else may know a word of it, makes me almost feel as if I never wanted to come up before them again. Will it be better to give up the whole thing? Ah! but there is no comfort there. Oh that this hour were passed! What shall I do? what shall I do? God have mercy on me a sinner! There is only one way, dear reader. Humilaiting as it is, I must go to the boy and apologize, before I can stand before these boys and girls without the awful feeling that I am, in at least some measure, a hypocrite. The boy accepts the apology, but for all that I have lost hold of him, and of my ability to influence him to be a Christian. I have sunk in my own estimation and his. Are these but trifles? Suppose you are trying to work for the Master, and a great many such little trifles are lying around and about you, and people are talking about the inconsistency of your life, while you profess to love the Lord Jesus Christ. Do you say people will talk any way? The older I grow, the more I feel that there is little need of people talking very much; and if you have half tried to put your life in God's hands, as we have been reading about, the chances are very great that people will be talking *good* about you (instead of evil), and give you a great deal *more* credit than you deserve. Who are the people who complain so bitterly of the unjust gossip and scandal that is talked about them?

Now let us go back. Suppose that, at the time I felt so impatient because Z. should so utterly disregard my plain, positive orders, I should have held this impatience in control until I had gone away by myself, and prayed God to guide me in the matter, more for the boy's good than for the interest of our business; suppose, in fact, I had said to myself, "You have placed your whole life, business, body, and soul, in God's keeping, and he is to manage this matter, or at least to dictate the way in which *you* are to manage it, and therefore the first and most important idea is the saving of this boy's soul." The result would be something like this: after having quietly subdued all feeling of annoyance, the boy is told pleasantly that he has not done that work yet, and watched until he has really set about it. It is soon done, and then comes a natural feeling to let it drop and say no more about it; but now comes in God's Spirit, and rebukes *your* indolence, and insists that, for the boy's own good, you take the matter in hand. After it has passed from his mind, and he is feeling pleasantly, you speak to him alone, something like this:—

"Z., why is it that you and I do not get along better?"

This speech takes him by surprise; but it appeals to his manhood also, because you have by it placed him on a level with yourself, as if the relations between you were like those of any business trade or transaction between two friends and neighbors.

"Why, Mr. Root, do we not get along well?"

"Usually, Z., except in one thing, and that one thing has annoyed and pained me very much indeed. It is because you neglect to do so many things I ask of you. Sometimes I have been uncharitable enough to think you purposely disobeyed, or did not care. It seemed to me that it was almost impossible that you should forget so many times; or if you really did forget, it was because your duties were unpleasant and irksome. Now, if such is the case, will it not be better for you to give up your place and let some one else try it? There are, you know, a great many begging for places."

Tears come into the boy's eyes, and he confesses, in part, his sin of forgetfulness, and in part he tells me something that I did not know, or even dream of, as a reason why he did not like to do the one thing that had annoyed me so much. In fact, it so happens that his greatest fault here was in erring in judging between two evils, and not any deliberate wrong. While I tell him kindly that he must learn to overcome forgetfulness, or some one will *have* to take his place, though much to my sorrow and regret, he feels that I am a friend to him all the same; and, although there are tears on his cheeks as we part, they are not tears of anger.

And now, my friends, do you suppose I am afraid to come before those young folks, Bible in hand, or that I am afraid to have them hear my voice in prayer? Why, bless you; I go up the stairs three steps at a bound, and run for my Bible with as joyous a step as ever urchin bounded out of school at the close of a summer day. No matter if I am a little late, and if the girls have commenced singing, my eye lights on this little verse.—

> Whosoever cometh to me, and heareth my sayings, and doeth them, I will shew you to whom he is like. He is like a man which built a house, and digged deep, and laid the foundation on a rock: and when the flood arose, the stream beat vehemently upon that house, and could not shake it; for it was founded upon a rock. But he that heareth, and doeth not, is like a man that without a foundation built a house upon the earth; against which the stream did beat vehemently, and immediately it fell; and the ruins of that house was great.—LUKE 6:47—49.

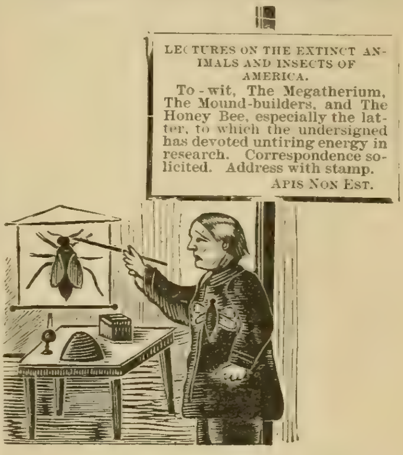
Do you wonder that, when the time comes for the closing prayer, my eyes, before closing, rest fearlessly, and, thank God, lovingly, upon the boy whom I have just repriman— why, come to think of it, it does not seem to me that he has been reprimanded, nor do I believe it rests on his mind so either. I am going to help him, and he is going to help me. O Lord, I thank thee, I thank thee. I thank thee that there is really a rest for the weary, and "glad tidings of great joy" for every poor sinful creature; yes, for even you, dear reader, if you will only surrender, and accept the guidance of Him who has said, "my yoke it is easy, and my burden it is light."

THE Mr. Woodward, spoken of last month in Humbugs and Swindles, is found, and is among people who will do all in their power to lead him to fix up all past irregularities. Let us give him a helping hand if he is truly penitent, and meanwhile, please do not utter one word more of censure.

THE great call for Simpson honey-plant seed has exhausted our seed already, and we have been obliged to buy more at more than our advertised price. Therefore the price is changed to $2.00 per lb., or 20c. per oz.; 18c. per lb. extra for bag and postage, where wanted by mail.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.


LECTURES ON THE EXTINCT ANIMALS AND INSECTS OF AMERICA.
To-wit, The Megatherium, The Mound-builders, and The Honey Bee, especially the latter, to which the undersigned has devoted untiring energy in research. Correspondence solicited. Address with stamp.
APIS NON EST.

REPORT FOR 1880, '81.

I HAVE enough hives and supplies to run the bee business of Union county for one year from date. Don't enlarge factory on our account. Will you let us have bees per pound, at former prices, this next season? if not, the lectures must go on; the bee, dead or alive, must get me out.

As far as I can find, there is hardly a single swarm of bees alive in this locality. Chas. Swetzer, of Plain City, one of the best apiarists to my knowledge, told me last week, that he had lost more colonies this season than he had altogether since he began the business; did not know how he would come out. All others with whom I have talked have lost all. Don't put us in Blasted Hopes. I have one hive packed in a box of chaff, and all alive yet, and no dead bees about the entrance. My others were not so protected. "Experience is a fool's school and a wise man's best friend." ROBT. MCCRORY.

Jerome, Union Co., Ohio, Feb. 8, 1881.

Now, friend M., deliver your lecture about the Megatherium, and the Mound-Builder, but please wait just a year before you give that about the honey-bee, for you do not know what Mr. Merrybanks is going to work out yet, besides what some of the rest of us may do. We are going to *try* to sell bees at old prices.

Bees are nearly all frozen around here. I fear you will not be crowded with orders next season.

L. H. COBLENTZ.

New Madison, Darke Co., O., Jan. 19, 1881.

Bees in this section did nothing last season; made no surplus honey; 99 out of 100 of our bee-men use the old box and linn hive. They lost, last season, at least nine-tenths of their bees.

HOWELL WHITSITT.

Wahalak, Miss., Jan. 20, 1881.

Seventy-five per cent of the bees in this county are dead already, with the prospect of more dying.

REYNOLDS BROS.

Williamsburg, Wayne Co., Ind., Feb. 1, 1881.

I must go into Blasted Hopes now, I guess. I got very little honey last year, and my bees will about all die again this winter; they are about half dead now, and I have paid out about $200 for bees in the last two years. I have no chaff hives; all single-wall hives. I never saw the deer mice so bad as they are this winter. My bees have the dysentery, caused by long confinement. Some have eaten all the honey in the center of the hive, with 2 or 3 full cards on each side of them yet; but it was so cold they could not get to it. A. J. HOOVER.

Huntsville, Luzerne Co., Pa., Feb. 15, 1881.

I have had the grape fever and the peach-tree madness, and haven't lost over a thousand dollars on both of them, and am now well of both. But, about five years ago I took a hive of bees on a slow debt, and since then the bee folly has been slowly developing. I have spent $100, and got $30 worth of honey and $20 worth of fun, which still leaves me $50 out, and bees all dead but one swarm, all leaving plenty of honey to have kept them. I have set my face against lotteries in general, but despise backing down until I know "what's the matter with Hanner." U. N. MELLETTE.

Nineveh, Johnson Co., Ind., Feb. 12, 1881.

How is it? have you for sale any mourning-gowns for bee-keepers to wear this spring? If so, what is the cost? I believe that you may realize a good business. I think you ought to keep such in your counter store. and advertise, and you may have quite a call from this section of country. Yesterday I went on business five miles away from this place to a box-hive apiary of 103 colonies of bees. We looked over their bees, and found about 10 colonies alive, and the rest all dead with the dysentery. The hives looked like molasses-barrels—the honey dripped down and came out of the bottom of the hive. The color of the honey was like molasses, and very bitter. Mr. D. could never see any good in frame hives. This is not all, for I hear from all around here about the same. I have lost, but not so heavily, but may yet before spring. GEO. CASTELLO.

Saginaw City, Mich., Feb. 23, 1881.

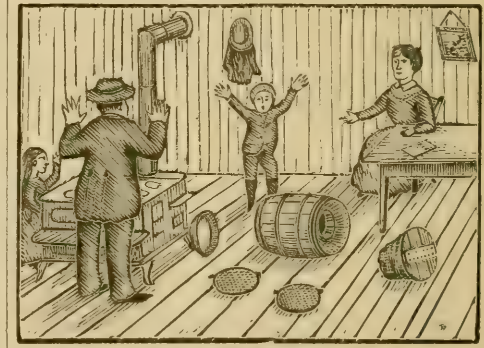
MR. MERRYBANKS' NEIGHBOR.

THE NEW BEE-HIVE THAT ALWAYS KEEPS THE BEES FREE FROM DYSENTERY.

WELL, I declare, dear friends, it has taken us a great while to get around to that bee-hive. You see I was a little afraid there might be a dispute some time, as to who was the *real* inventor, and so I have taken several chapters, to go over the whole story of the incidents that led to the great discovery.

Well, when friend Merrybanks came up to the door that cold stormy morning, just as John was going out to see to those bees (see page 572 Dec. No.), he carried something in his arms that John immediately recognized as the new bee-hive. Of course, the sight of this brought sunshine, for friend M. was always a welcome visitor; and as he came up the door was open wide for him to bring in the wonderful structure. John's mother, with a smiling face (for she too had been lifted through her trials and discouragements more than once by our genial friend) moved out the table so that, as the hive rested on it, all could have a view from all sides. Well, this hive, to all external appearance, was nothing more nor less than an ordinary cracker-barrel, with the exception that in one end was an auger-hole; but even this is so common in barrel-heads that none but John would have noticed, probably, that a tube of wood just reached out through it, flush with the head of the barrel. This tube was so near the chime of the barrel that the end of the stave under it would have made a very fair, though perhaps narrow, alighting-board. John took in all these points while friend M. was warming his hands at the stove, and making inquiries about Mary, who had had a spell of the croup. As the wind whistled without, and sent cool breezes through the cracks of the house, friend M. was asking if the house had been properly banked up, that the children might not be exposed to these chilly drafts; and as he did so he glanced down at the floor, which seemed neither very tight nor very warm underneath.

Just at this point, John had concluded his investigations far enough to decide, within his own mind, what the contents of this mysterious barrel were. and so elated was he with the idea, that he commenced dancing up and down, boy like, in token of his approval of the bee-hive. Well, this same floor that friend M. was considering, was hardly equal to such demonstrations. You see, when John's father had the floor laid, the centers of the sleepers were supported on blocks of wood set on end. I do not know why he was so thoughtless as to use blocks when stone would have cost but little more time and trouble; but so he did, and these blocks had lasted just about five years, when the lower ends were rotted off. Well, John's jumping seemed to give just the right-timed vibrations to set the room all in a teeter, and of course the barrel began to roll; and before any one knew it, it had rolled off on the floor. As it did so, one head came out, and with the head, out tumbled a queer-looking cushion and a wooden bowl, filled with some white substance that John rightly interpreted to be bee-candy. While John is eagerly taking in all of the features of this great hive, I think we will take a peep over his shoulder and see too.



FRIEND M. AND HIS HIVE AS IT ROLLED OFF ON THE FLOOR.

Away back in the barrel he saw that identical pail that we saw last month down by the fence. You see, the bees, being a late swarm, had starved out in October, and deserted the hive; and as friend M. had asked for it, it was of course given him. The pail was put in just about the center of the barrel, and all was then filled in and around with packed chaff. The chaff was kept in place by burlap or bagging tacked from the edge of the pail to the edge of the barrel. To the head of the barrel was tacked a burlap cushion that just filled the cavity. The wooden bowl filled with candy was only for wintering, and for giving destitute colonies all the stores they would need for winter, at one "dose." The entrance was a wooden tube with a one-inch hole, and it reached from the bottom of the pail to the opposite end of the barrel. The combs were made movable by cutting out each carefully, as built by the bees in the pail, and putting them in a little light hoop made of basswood, steamed and bent, and left on a form until dry, that they might be perfect circles. On opposite sides of the pail was tacked a light tin rabbet; and an arm of tin, similar to those on the metal-cornered frames, was tacked to the opposite sides of the wooden hoops.

After the pieces were gathered up and placed again on the table, and John was put "under bonds" not to jump any more, at least until the floor had been fixed, his mother, who did not usually say very much, was the first to break the silence.

"Am I correct, in thinking you expect the bees to winter better in such a hive, because they will be more nearly in the form of a sphere, something as they are in the old straw hive, or a hollow tree?"

"That is just the point exactly, my friend; and when the queen commences to rear brood she starts in circles in the center of the comb, and as these circles enlarge, the bees find a close, warm inclosure all about them, instead of cold corners full of nooks and crannies for the heat of the hive to be constantly escaping."

Here Mr. Merrybanks began feeling first in one pocket and then in the other, as if he suddenly remembered something. Pretty soon he brings out a letter, and, as he unfolds it, remarks,—

"The idea is by no means new, for the Germans have for years used a hive with a round roof to it, the frames of which could only be taken out by turning the hive over.* On the Isle of Cypress, the natives use hives of a cylindrical shape,† and here is the letter I was trying to find, from one of our friends in Scotland, as you will see," and Mr. M. read as follows from a letter that had a drawing of an octagonal frame on it:—

I find the queen commences in spring to lay in a circle, and does not go near corners for a long time. One apiary here is nearly all as above, and the owner says they breed much better in spring than on square frames. ANDREW PRATT.

Link's Schoolhouse, Kircaldy, Scotland.

John's father, who had been listening eagerly, here interposed,—

"Would not that wooden bowl full of candy winter a swarm of bees that had just empty combs and no stores at all?"

Very likely he was thinking of that swarm out of doors, probably in just that predicament; John's mother replied,—

"But the candy would need flour in it, unless they had pollen in their combs."

"I am not so sure of that," replies friend M.; "in fact, late developments seem to imply that if we can keep pollen away from the bees, so as to hinder brood-rearing, until about the time they would get it from natural sources, we are really better off;" and again he begins fumbling in his pockets. It is one of friend M.'s peculiarities, that he is almost always looking for something somewhere in his pockets. He almost always finds it, though, and so he did in this case. He has loaned me the letters, so I can easily give them here, you see.

POLLEN, AND ITS RELATION TO DYSENTERY AND SPRING DWINDLING.

I think what makes bees have the dysentery, is eating pollen in cold weather. I have been looking at my bees to-day. They were covered up in the snow. The first swarm I shoveled out was the one that made the most honey last season. The bees had melted a large place around the entrance. Oh what a mess! Two quarts of dead bees out there, and they had "painted" the front of the hive. I don't like the color, the smell, nor the way they put it on. I remember this colony had a large lot of pollen in their frames last fall. I took a look at a swarm to which I fed good clear honey, so they could not get any pollen. They are in splendid condition. The entrance is clean and dry as in summer. I went to another hive from which I had taken frames of pollen, and replaced with clear honey. I found them in a good healthy condition. Other swarms that I knew had too much pollen have got the dysentery.

Two years ago last fall I fed a swarm with sugar syrup. I stirred in some flour with it. They had the dysentery before spring. I fed another colony the clear syrup, and it wintered nice and didn't want to fly for the winter. I have come to this conclusion, that pollen is very bad stuff for bees to eat in the winter; but frames of pollen and honey to give the bees the first of April or last of March is just what I want.

When I find swarms raising brood in Feb., I set them down as worthless. They are sure to stop and then dwindle. If I can keep my bees from raising brood until the first of April, and keep them in a healthy condition, they are all right for a large crop of honey when it comes. My bees are packed in chaff.

E. A. ROBINSON.

Exeter, Maine.

"But," says John, "where are you going to put the honey-boxes when our hives get full of bees, and honey is coming in 'like split'?" Here his mother gave him a gentle tweak on the ear, just in play, you know, for using the slang phrase, "like split," and friend M. replied as follows:—Come to think of it, I believe I won't tell what he said until next month. You know you won't need any boxes just yet. Good-night, all.

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* See p. 237, Vol. IV.; p. 61, Vol. V.

† P. 216, Vol. VIII.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, MAR. 1, 1881.

Charity suffereth long, and is kind, * * * * is not easily provoked, thinketh no evil.—I. COR. 12:4, 5.

WE have to-day, Feb. 28th, 3,635 subscribers.

GOD has delivered "D." out of jail, and he is now at work among us.

I WOULD not advise ordering bees by the lb. before about April 1st; this March weather is rather severe on small clusters.

THE Christian's Secret of a Happy Life will be found on the 35c counter. Although it is advertised at 30c. in Canada, I am obliged to charge 35c. for it, on account of the duty.

THE oatmeal mentioned by friend Clark, in the Lunch-Room Department, can be purchased at the address given, for only $4.50 for a barrel of 200 lbs. Is not that cheap enough?

THERE is, of course, quite a demand for sheets of fdn., for making the plaster plates. As very perfect sheets are needed for this purpose, and additional packing is required, our prices will be, for the present, one-half more, where wanted for this purpose. If anybody else can furnish them cheaper, I shall be glad to have them do it.

YOU will observe, by the clock advertisement, that I have at least once been guilty of selling goods below what the manufacturers wished me to. I wrote them at once that I had no desire to sell any goods at a less figure than what the makers would approve of, and I repeat it here, I do not want to crowd anybody, nor have I any dealing that I have any reason to wish to be kept secret.

THE man who makes the 15c. dictionaries said he had sent us 100 before I advertised last month; but after complaining that they did not come, he wrote it was a mistake—they had not been sent, but would be out in a couple of weeks. They are not here yet, but as he now has our order for a thousand, I think we shall have plenty some time. They are certainly a wonder for the money, but I begin to think, as I have often before, that I will never advertise a thing again until it is right in our hands.

O. JUDD & Co. have just sent us a most beautiful and useful book, entitled "Barn Plans and Out-Buildings." It contains 257 most beautiful engravings, and it seems to me the book would save its price to almost any farmer in a single year. Those who are going to build, even though it be nothing more than a pig-pen (of course, I mean a better one than Mr. Merrybanks' neighbor's), would surely save the amount. It is full of hints and appliances that may be made cheaply for the protection and comfort of all the dumb animals about you. I wonder if our friend Mr. Bergh has ever seen a copy of it.

THE LITTLE "BATTERY" SWINDLES.

ALTHOUGH it is a little out of the bee-line, I feel it a duty to caution our readers against the swindles in the line of what is called miniature galvanic batteries, Boyd's being perhaps the leading one. There is no more electricity about it than there would be about a brass button strung around the neck; and the way in which intelligent people, who should know better, have listened to such absurd nonsense, is positively awful. No doubt they "felt better" after putting the things on, but so did those who "put on" the German bee-sting cure a few years ago; but who uses the stuff now? It is a disgrace to a nation of intelligent people to have such things advertised in respectable papers. There are certainly men in every community who know enough of batteries and electricity to explain to you the utter absurdity of a lump of metals giving out a "current." I have taken up the matter, because one of our advertisers was innocently led to advertise them in his circulars.

BEES AND GRAPES.

OUR friend Peter Klasen has paid me a visit, and after quite a little talk with him, I am pretty well satisfied that the trouble between himself and Mr. Krock is only one of a series of troubles, originating long before the matter of the bees and grapes was ever thought of. The point, therefore, at issue is a personal difficulty between the two neighbors, and does not concern bee-keepers and grape-growers at all. If the two men get over their other troubles, this one will right itself. Friend Klasen offers to leave the matter to arbitration, and I feel quite sure friend Krock will eventually consent to the same, if he has not already. If I am correct, neither party is lacking in the right spirit usually. Once upon a time, a neighbor's wife got stung, and her husband came over and complained. Friend Klasen good-naturedly remarked that honey is a sure cure for a bee-sting, and he would take some over and show her how bee-men always used it when they got stung. Instead of taking over a spoonful, however, he carried over *two boxes;* it not only stopped the pain, but cured all ill feeling, and both husband and wife declared they would be more careful in the future how they became impatient about so trifling a matter again. You see, this is the spirit we need. Friend Klasen is going to move his bees out of town, and now we look for Mr. Krock to be magnanimous, and at least submit the whole matter, as it now stands, to the arbitration of mutual friends. The law we published last month has, we learn, been repealed.

CIRCULARS AND PRICE LISTS RECEIVED.

Alfred H. Newman, 972 West Madison st., Chicago, Ill., sends us a finely printed 32-page catalogue, copiously illustrated, of bee-keepers' supplies.

Edward B. Beebee, Oneida, N. Y., has issued a 12-page circular of apiarian supplies, making a specialty of queen-breeding. The printing reflects great credit on Messrs. Jackson & Potter, of Oneida.

Riegel & Drum, Adelpha, O., are out with an 8-page price list of bee-keepers' supplies, this being their third annual edition.

J. E. Moore, Byron, Genesee Co., N. Y., issues a 4-page sheet, being his 4th annual circular of apiarian supplies.

M. Richardson, Port Colborne, Ont., Can., has sent us an 8-page price list of general supplies for the apiary.

J. O. Facy, of New Hamburgh, Ont., Can., sends a 2-page circular of queens and supplies.

H. Nicholas, Etters, York Co., Pa., sends us a 1-page circular of queens.

Our friend Given has *given* us a most valuable circular of fdn. of all makes. It contains 18 pages, and should be read by every bee-man and bee-woman.

Friend Muth sends us a very pretty little book of 32 pp. entitled "Hints to Bee-Keepers." It is rather a book (and a book of no small value) than a price list, for his price list, it seems, is a separate affair. Price 10 c.

Bright Bros., Mazeppa, Minn., publish an 18-page circular of apiarian supplies.

J. T. Wilson, Mortonsville, Ky., dealer in Italian queens, issues a 1-page circular.

W. S. Pouder, Groesbeck, Hamilton Co., O., has sent us a beautiful 1-page circular of Italian queens and bees.

Chas. S. Lake, Baltimore, Md., has sent us a 28-page circular and price list, gotten up in first-class city style. Mr. L. deals in the usual run of apiarian supplies.

Friend Flanagan, Belleville, Ill., sends a postal-card circular of bee-keepers' supplies.

Friend Hayhurst, Kansas City, Mo., sends us a postal circular relating to his speciality — Italians and Cyprians.

J. A. Osborne, Rantoul, Champaign Co., Ill., dealer in apiarian supplies, publishes a 4-page circular of implements.

F. W. Holmes, Cooperville, Ottawa Co., Mich., sends us a very pretty 4-page price list of useful implements for the apiary.

Honey Column.

Cincinnati.—Under date of Feb. 23d, friend Muth writes: No change in the honey market. Demand for comb honey extremely slow.

New York.—Messrs. H. K. & F. B. Thurber & Co., under date of Feb. 23d, write: Best white comb honey, small neat packages, 17@18; fair do., 14@16; dark do., 11@13; white extracted, 9@10; dark do., 7@8. Southern strained, per gall., 85@90. Beeswax, prime quality, 20@25.

Chicago, Feb. 22.—Present market quotations are as follows: *Honey.*—For choice white comb honey, 1 and 2 lb. boxes, 18@20 c; for fair to good light combs, 14@16 c; and for large boxes, dark honey and broken lots, 10@12 c. Extracted honey remains the same — 8@10 c. *Beeswax.*—20@23 for light, 15@17 for dark.

In November and December, choice comb honey was very scarce, and the price went up to 22 cents; still, very little comb honey came in. Bee-keepers were holding back their honey for a further advance; but as it failed to advance, they concluded to sell. The result is, the market to-day is flooded, and the price has dropped. If this honey had been in the market in November, it would have brought 22 c easier than it will bring 18 now. **A. H. Newman.**

I have a barrel of white-clover honey, weighing 235 lbs., for which I will take 10 c per lb., and $1 for barrel, delivered on cars at Gettysburg, Adams Co., Pa.
Aaron P. Weidner.

Recent Additions to the
COUNTER STORE.

FIVE-CENT COUNTER.

Postage.]		[Pr. of 10.	of 100
5	Butter-Prints; wood; very pretty....	40	3 75
8	Cattle-Cards, for Cattle, or Horses'...	43	4 00
2	Soldering plate, for mending tinware	45	4 00
10	Clothes-Lines; 20 ft. long........	40	3 75
	Extracts, 2-oz. bottles, good; Jamaica Ginger and Vanilla..................	38	3 50
4	Envelopes; fair quality; bunch of 25	40	3 50
1	Garden Seeds, choicest and best varieties, carefully tested seed as follows:	45	4 00

Beans, Beets, Cabbage, Carrot, Cauliflower, Celery, Corn, Cress, Cucumber, Lettuce, Melons, Onion, Parsnip, Peas, Pepper, Pumpkin, Radish, Salsify, Spinach, Squash, Tomato, and turnip.

2	Napkins; nice, but rather small	45	4 25
2	Purses; two kinds, buck and leather	43	4 00
2	Spectacle-Cases; Leather; excellent..	40	3 75
2	Wallets; 4 pockets; full size; nickel-trimmed	40	3 75

TEN-CENT COUNTER.

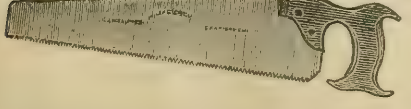
5	Note Heads, such as we use; package of 50...........	70	6 50
2	Saws; Scroll; 3-16, 4-16, and 5-16 in. in width, and 7 in. long, pierced at each end; best American make, for Barnes or other foot-power saws.............	80	7 00
5	Spoons, Tea, German Silver, Hall & Elton's well-known make	98	9 50

FIFTEEN-CENT COUNTER.

5	Try-Square; 4 in. steel blade; Rosewood handle, brass lined; a beautiful tool...	1 40	13 50
6	Nutmeg Grater, Rajah pattern, the best thing out, uses up all the nutmeg.......	1 30	12 00

Twenty-Five Cent Counter.

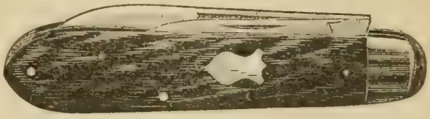
3	Bits; best make, 4 sizes; viz., ½, 7-16, 3-8, 5-16	2 00	18 00



12	Saws, Carpenters', 10 in.; Disston's make, a splendid tool for 25c. Nice because it is small...................	2 25	24 00
8	Screws; Bessemer Steel; 4 sizes, ½, ⅝, ¾, ⅞, in gross packages	2 00	18 00

Thirty-Five Cent Counter.

3	"The Christian's Secret of a Happy Life." Worth its weight in gold...	3 00	28 00
	Coal Hods, japanned; good	2 75	26 00
	Hammers, Carpenters', full size; *solid cast steel*, adze eye. This is exactly like our 75c hammer, only it is not so nicely finished	3 25	31 00



4	Knife as above, best, hand-forged, razor steel, 3½ in. long when closed	3 00	28 50
15	Saws, Disston's make, 12 in. blade; fine steel, and beautifully finished. Nice for small work, or the women to have about the house............	3 25	31 00
26	Screws, Bessemer Steel, 3 sizes, 1, 1¼, 1½, in gross packages..........	3 10	30 00

FIFTY-CENT COUNTER.

8	Envelopes, good, packages of 100, with your business card, etc., neatly printed on each (3 p'kages for $1.)	3 00	25 00

Note Heads, fine paper, to match above, same prices.

34	Screws, Bessemer Steel, 2 in.; in gross packages......................	4 00	37 50
18	Umbrella, tip-top for the children to go to school with....................	4 00	38 00

Seventy-Five Cent Counter.

	Scoop Shovels, iron; good and well made................................	6 00	54 00
20	Umbrella, good, but only medium size..................................	5 50	50 00

ONE DOLLAR COUNTER.

7	Postal Cards, printed to order, in packages of 50 (*Three for $2.25*)....	6 00	55 00
2	Watch Chain, Horsehair, and very pretty for the $4.00 watch. These were made by "D.," while in jail..	7 50	70 00

A. I. ROOT, Medina, Ohio.

HEADQUARTERS IN THE SOUTH
For the Manufacture and Sale of
BEE-KEEPERS' SUPPLIES!
SIMPLICITY AND LANGSTROTH HIVES AND FRAMES. THE NEW ALL-IN-ONE-PIECE SECTIONS!

Having purchased from A. I. Root a machine for making the sections, I am ready to supply them in any quantity.

Comb Foundation, made of pure yellow wax, and worked on shares, etc. Honey and Wax-Extractors; Knives, Bee-Smokers, etc., etc.

ITALIAN QUEENS AND BEES!

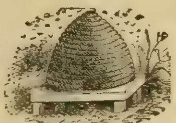
All bred from imported mothers of my own importation. Dollar queens, ready April 1st, $1.10 until June 1st; after, $1.00.

Tested queens, from March 1st to November 1st. Safe arrival guaranteed, and all queens sent by mail. I send no queens that I would not have for myself. Full Colonies of Italian Bees from $5.00 to $8.50, according to quantity, etc. Early 4-frame nucleus, with Tested Queens, $5.00—No black bees in the neighborhood. Send for my Illustrated Catalogue of prices, etc. Address
PAUL L. VIALLON,
3d Bayou Goula, Iberville Par., La.

BEES FOR SALE!

100 Colonies in Simplicity and Everett-Langstroth hives. Address J. P. HOLLOWAY,
3-4d Monclova, Lucas Co., Ohio.

FOR SALE! Pure bred Pekin Duck eggs, for hatching. Packed securely and delivered at express-office on receipt of price, $2.00 per eleven. Address H. C. JOHNSON,
3-5 Reesville, Clinton Co., Ohio.



Our Catalogue

FOR 1881

IS NOW READY!

Sent Free To All.

Every Bee-keeper who expects to purchase a dollar's worth of

Bee-keepers'

SUPPLIES!

should read it. Send us

YOUR NAME!

ALSO THAT OF YOUR

BEE-KEEPING FRIENDS,

PLAINLY WRITTEN on a postal card, and it will be mailed you at once. Address

H. A. BURCH & CO.,
SOUTH HAVEN, VAN BUREN CO., MICH.

Largest and Best.

CATALPA TREES

I will send, postpaid, to any part of the United States, 10 nice little trees, good roots, one year old, for 30c, or 100 for $2.50. Seeds, per package of 50, 25c. Seeds germinate as easily as corn. The Catalpa is one of the *best bee-trees*! Hangs full of long clusters of yellowish-white blossoms, very fragrant and ornamental, and yielding a heavy flow of honey. Wood very durable, shoots from young trees making grape-stakes which last for years.

2-4d H. M. MORRIS, Rantoul, Champ. Co., Ill.

1881.

Send for our new Circular and Price List of Full Colonies, Nuclei, and Queens. We guarantee satisfaction. S. D. McLEAN & SON,
2-7d Culleoka, Maury Co., Tenn.

Do Not

Save Your Fowls!

and get Price List of High-Class Poultry, Eggs for hatching, Italian Bees, etc., by addressing J. R. LANDES,
3-6d Albion, Ashland Co., Ohio.

FAIL

RAISING TURKEYS

AND CHICKENS.

Send 15 cents to **NATIONAL FARMER CO., Cincinnati,** and get by mail **"What 20 Persons (noted for their Great Success in Raising Turkeys and Chickens) Have to say."** Reading what these experienced persons have to say will give one more information how to be successful than the reading of any Dollar Poultry Book. 2-4

FRUIT

TREES CHEAPER THAN EVER

As I am going out of the nursery business, I will sell apple-trees at the following low figures:—

4 years old, 6 to 8 ft.,	- - -	$5 00 per C.
3 " " 5 to 6 ft.,	- - -	$4 00 per C.
2 " " 4 to 5 ft.,	- - -	$3 00 per C.

If taken by the thousand, 20 per cent discount. Any parties wanting 10,000 of the three different sizes, a deduction of 25 per cent allowed. No better trees are grown in the State than I offer. I have also pear and cherry trees, and other nursery stock too numerous to mention, at very low figures.

2-4d J. B. MURRAY, Ada, Hardin Co., Ohio.

ALBINO, ITALIAN, AND HOLY-LAND QUEENS, FULL COLONIES, ETC., FOR 1881!

I am prepared to furnish early queens, pure Albinos, Italians, and Holy-Land Queens, bred from select stocks. Warranted to be pure; safe arrival guaranteed. Also Hives, Novice's Extractor, and Apiarian supplies generally. Send for price list. Address

S. VALENTINE,
Double Pipe Creek,
3-5d Carroll Co., Md.

FOR SALE OR RENT!

I will sell or rent my shop on easy terms. Built last year, expressly for manufacturing bee-keepers' Supplies; or I would take in a partner for a term of years—one capable of running that business. Shop well located, and business well started. Capital required in either case, about $500 down. Send for price list of Bees, Queens, and Apiarian Supplies.

2-3d I. S. CROWFOOT, Hartford, Wash. Co., Wis.

CHAFF HIVES! A SPECIALTY!

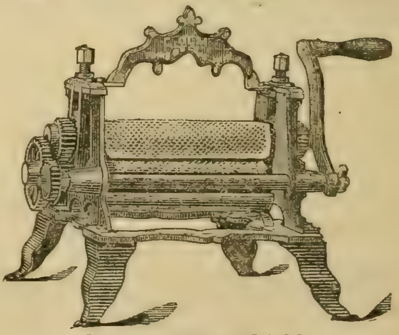
SEND FOR CIRCULAR.
J. P. WATTS,
LUMBER CITY,
2-4 Clearfield Co., Pa.

BEE-KEEPERS' SUPPLIES

It will pay you to get our prices before purchasing your Supplies. Good Langstroth Hives with 8-inch cap, frames, quilt, etc., in the flat, 60 cents each. Manufactured from good pine lumber. Workmanship unexcelled. Crates, Sections, Extractors, and Dunham Foundation, a specialty.

HIRAM ROOP.
2-6d Carson City, Montcalm Co., Mich.

C. OLM'S COMB FOUNDATION MACHINE.



9-inch.—Price $25.00.

The cut represents the 9-inch machine; the cheapest made until now. Send for Circular and Sample.
2tfd **C. OLM,** Fond du Lac, Wis.
JOHN BAXTER, Pickering, Ont., agent for Canada.

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SURPRISE RASPBERRY!

A new seedling. Fruit bright-scarlet; brings five cents per qt. more than any other variety in market. Perfectly hardy. Try it, please One dozen plants by mail for $1.50.
E. VAN ALLEN,
4d Bethlehem Centre, Albany Co., N. Y.

1881 CHOICE ITALIAN AND ALSO CYPRIAN QUEENS FOR SALE. **1881**

Parties ordering of me will get just what they bargain for. Circular free.
Address J. C. POMMERT, Box 124,
4-5 Greenfield, Highland Co., Ohio.

1881 QUEENS! QUEENS! 1881

We are prepared to furnish Queens in April, May, and June. For tested Queens, $2 50; afterward, $2.00; untested, $1.00. Queens reared in full colonies from imported mother. In addition to our imported Queens, we have some fine Queens in our apiary from some of the leading breeders of the U. S. We not only select our imported Queens to rear Queens from, but we select the best imported and the best home-bred Queens we have to rear drones from. We allow no colonies to have drones, except such as are from the choicest of our Queens. Satisfaction and safe arrival of all Queens guaranteed. No circular. HALL & JOHNSON,
3-4d Kirby's Creek, Jackson Co., Ala.

WANTED.--A situation in an apiary, for the summer of 1881, by an experienced hand. Good references given if desired.
EDWARD ESTEY,
4 Clarence, Shelby Co., Mo.

CHEAP BEES!

Forty colonies of Italians in good hives at five dollars each.
E. A. GASTMAN,
4 Decatur, Macon Co., Ill.

FOR SALE.--25 bush. pure evergreen sugar corn for seed at $2.00 per bushel. Sample pound by mail, 20 cents.
Address J. A. WARD,
4d Madisonville, Ham. Co., Ohio.

FOR SALE.--Italian bees and queens; Root's metal-corner frames; smokers; comb fdn. and apiarian supplies; Italian (tested) queens, ready for order. OTTO KLEINOW,
4d Opposite Fort Wayne, Detroit, Mich.

1881. QUEENS! 1881.

Bee-keepers who want early Italian Queens, or late ones of any description, please send for prices on a postal card. Cheap. Address A. W. CHENY,
4 Kanawha Falls, Fayette Co., W. Va.

COMB Foundation Machines from $1.00 to $5.00. Comb Fdn., less than 5 lbs., 40c; over 5 lbs., 35c; over 50 lbs., 34c; over 100 lbs., 33½c. Price list free. Italian queens from Imp. mothers, $1. ready in April.
4tfd JOHN FARIS, Chilhowie, Smyth Co., Va.

HIVE MANUFACTURERS.

Also imported and home-bred Queens, Full Colonies, and nucleus colonies. Bee-Keeper's Supplies of all kinds. Market price for beeswax. 4-7d
NICHOLS & ELKINS, Kennedy, Chaut. Co., N. Y.

LEWIS & DETWILER,
Manufacturers of
APIARIAN SUPPLIES,
4-5d **24 SUMMIT ST., TOLEDO, O.**

Strawberry Plants! Crescent Seedling, $1.50, and Chas. Downing, $1.75 per 1000. Pure new-bed plants.
E. VAN ALLEN,
4d Bethlehem Centre, Albany Co , N. Y.

FOR SALE.—600 worker combs built mostly the past summer and fall from foundation 4 to 5 sheets to the pound. A. FAHNESTOCK,
4d Toledo, Ohio.

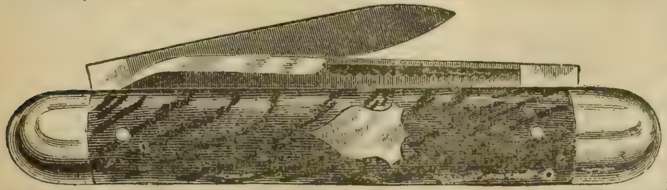
Pure Bred Plymouth Rock Fowls

and eggs for hatching. Amber-cane seed, and Dhoura. Send card for circulars, etc., to
3-4d N. J. ISRAEL, Beallsville, Monroe Co., O.

D. S. GIVEN,
Inventor and Sole Manufacturer of the
FOUNDATION PRESS.

All Presses warranted to give satisfaction. The only invention to make fdn. in wired frames. Our thin and common fdn. for '81 is not surpassed. Send for Catalogue and samples.
4-6d D. S. GIVEN, Hoopeston, Illinois.

No. 132, Price 60c. **MAHER & GROSH, 34 N. Monroe St., Toledo, Ohio,**



show here a new knife, No. 132, metal ends, strong blades; price, postpaid, 60c. Our goods are *hand-forged* from *razor steel*, every blade warranted, and exchanged *free* if soft or flawy. F. H. Day, Wilmington, Del., writes, Jan. 12:—"After receiving the knife I honed it down to a fine, keen edge, and tried it on hard, dry white-oak; the edge neither turned nor broke, which is more than I can say of any other knife I ever owned." We expect to build up our trade by selling GOOD GOODS; will you help us? Our extra-heavy 2-blade, made for farmers and mechanics, is the best knife in the market; price, postpaid, 75c. Boy's knife, 25c; ladies, 1-blade, 25c; 2-blade, 50c; Gent's 3-blade, $1 00. Extra strong *Pruner*, every blade tested, $1.00. Our hand-forged butcher-knife, 6-inch blade, postpaid, 50c. Illustrated list of knives, razors, and scissors, sent free to any address. 2-4

At Kansas City, Mo.,

I breed pure *Italian* and *Cyprian* bees for sale. I warrant my "Dollar" queens to be mated by pure yellow drones, and guarantee safe arrival and perfect satisfaction.

Tested Queens,	in May	$3 00
" "	in June	2 50
" "	after "	2 00
"Dollar" "	in May	1 50
" "	in June	1 25
" "	after "	1 00

Bees, per lb., same prices as Dollar queens.

Please address all letters plainly to
3-5d E. M. HAYHURST, *P. O. Box* 1131.

GUARANTEED
Italian Queens!

I guarantee all my queens to be purely mated from imported mother. Safe arrival and satisfaction guaranteed. Send for circular. Untested Queens in May and June, $1.50. July and after, $1.00. Tested Queens, May and June, $2.50. July and after, $2.00. Select tested, $3.50.

Address— L. C. M'FATRIDGE, M. D.,
2-7d Carroll, Carroll Co., Ind.

Before Purchasing

any Italian or Cyprian bees, send for our 20th annual price list. Full colonies, Nuclei and Queens, at greatly reduced prices. Also headquarters for Apiarian supplies in New England.

WM. W. CARY & SON (formerly Wm. W. Cary),
3tfinq Colerain, Franklin Co., Mass.

WESTERN BEE-KEEPERS

Can save money by sending for our new illustrated Circular and Price List of *Apiarian Supplies; Note and Letter Heads, Cards, etc.*

BRIGHT BROTHERS,
3-4 Mazeppa, Wabash Co., Minn.

RASPBERRIES FOR SALE.

	per doz. by mail.	per 100 by exp.	per 1000
Doolittle,	30c	$1 00	
Clarke's Red,	30c	1 00	
Mammoth Cluster,	40c	1 50	
Davison's Thornless,	30c		
Ohio,	40c	1 50	$8 00

Ohio is one of the best; will yield a third more than any berry I know; is very firm and large; one of the best for drying; begins to ripen about the time of the Doolittle, and lasts till after the M. Cluster. Will pick as much as any of the varieties at a picking. It is equal to the Gregg, if not better. If by mail, add 20c per doz. J. IRVIN JOHNSON,
2-4d Box 405, Palmyra, Wayne Co., N. Y.

IMPROVED
Langstroth Hives.

Supplies for the Apiary. Comb Foundation a specialty. Being able to procure lumber cheap, I can furnish Hives and Sections very cheap. Send for a circular. A. D. BENHAM,
2tfd Olivet, Eaton Co., Mich.

QUEENS! Tested, $2.00; Untested, $1.00. Warranted, $1.35. Plymouth Rock eggs for hatching, $1.25 per doz. For price of hives and other supplies, send for circular. Address
4d HARTWELL BARBER, Adrian, Len. Co., Mich.

STRAWBERRY PLANTS!

Miner's Great Prolific, and Crescent Seedling, the two great market berries. All the best kinds by mail. Prices very low. Send for price list.
3-4 W. O. POST, Essex, Middlesex Co., Ct.

HEADQUARTERS FOR
Early Italian & Cyprian Queens!

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new circular. Address
1tfd DR. J. P. H. BROWN, Augusta, Ga.

THE
British Bee Journal.

The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan. 1881. Will guarantee safe arrival of every No.
A. I. ROOT, Medina, Ohio.

1881 ITALIAN QUEENS! 1881

Tested Queens........$1 50
Warranted Queens.. 1 00
Cyprian Queens, untested 1 00

As most all the Dollar queens I sold last year were pure, I will warrant them this year.
J. T. WILSON, Mortonsville,
2-7d Woodford Co., Ky.

Eggs for Hatching!

I was awarded first premium on Brown Leghorns and Black B. R. Game Bantams, at N. Y. State Fair, Albany, in Sept. last. Am booking orders now, to be filled in rotation, at the following very low prices:

Brown Leghorn Eggs, - - $1 00 per doz.
B. B. R. G. Bantams, Imported, - 1 50 " "

With my style of packing, in new baskets, eggs will go safely any distance, and hatch. I guarantee safe arrival. C. W. CANFIELD,
Athens, Bradford Co., Pa.

HEADQUARTERS IN THE SOUTH
For the Manufacture and Sale of
BEE-KEEPERS' SUPPLIES!

SIMPLICITY AND LANGSTROTH HIVES AND FRAMES. THE NEW ALL-IN-ONE-PIECE SECTIONS!

Having purchased from A. I. Root a machine for making the sections, I am ready to supply them in any quantity.

Comb Foundation, made of pure yellow wax, and worked on shares, etc. Honey and Wax-Extractors; Knives, Bee-Smokers, etc., etc.

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PAUL L. VIALLON,
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3-4d Monclova, Lucas Co., Ohio.

FOR SALE! Pure bred Pekin Duck eggs, for hatching. Packed securely and delivered at express-office on receipt of price, $2.00 per eleven.
Address H. C. JOHNSON,
3-5 Reesville, Clinton Co., Ohio.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Newark, Wirt Co., W. Va.	2-1
*A. I. Root, Medina, Ohio.	
*H. H. Brown, Light Street, Columbia Co., Pa.	1tf
*E. M. Hayhurst, Kansas City, Mo.	1-12
*Paul L. Viallon, Bayou Goula, La.	1tfd
*D. A. McCord, Oxford, Butler Co., O.	1-12
*S. F. Newman, Norwalk, Huron Co., O.	1tfd
*B. Marionneaux, Plaquemine, Iberville Par., La.	65
*J. T. Wilson, Mortonsville, Woodford Co., Ky.	6-6
*Chas. G. Dickinson, Sou' Oxford, Chen. Co. N. Y.	1-10
*Wm. Ballantine, Sago, Musk. Co., O.	2tfd
J. S. Tadlock, Kingsbury, Guad. Co., Texas.	3-7
*W. H. Nesbit, Alpharetta, Milton Co., Ga.	3tfd
*J. O. Facey, New Hamburg, Ont., Can.	4-9
*H. Nicholas, Etters, York Co., Penn.	4-8
W. S. Canthen, Pleasant Hill, Lan. Co., S. C.	4-6
*John Conser, Glenn, Johnson Co., Kans.	4-9
J. H. Burrage, Concord, Cab. Co., N. C.	4
*Fischer & Stehle, Marietta, Wash. Co., O.	4-9

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.	
Sid. D. Buell, Union City, Branch Co., Mich.	2-7
P. L. Viallon, Bayou Goula, Iberville Par., La.	1tfd
S. F. Newman, Norwalk, Huron Co., O.	1tfd
J. F. Hart, Union Point, Greene Co., Ga.	4-3
M. S. West, Flint, Genesee Co., Mich.	2-7

Foundation Manufacturers.

Who agree to make such foundation, and at the prices given, as described in our circular.

A. I. Root, Medina, Ohio.	
Jas. A. Nelson, Wyandott, Wyandott Co., Kans.	4-9
E. S. Hildemann, Ashippun, Dodge Co., Wis.	4-5

Bees by the Pound.

Those whose names appear below agree to furnish bees by the lb., and at the prices given in our circular.

I. L. Scofield, Chenango Bridge, Broome Co., N. Y.
S. C. Perry, Portland, Ionia Co., Mich.
J. P. Moore, Morgan, Pendleton Co., Ky.
W. R. Whitman, New Market, Madison Co., Ala.
Chas. Kingsley, Greeneville, Greene Co., Tenn.
C. D. Wright, Baxter Springs, Cherokee Co., Kans.
H. B. Harrington, Medina, Medina Co., O.
W. St. Martz, Moonshine, Clark Co., Ills.
O. H. Townsend, Hubbardston, Ionia Co., Mich.
G. W. Gates, Bartlett, Shelby Co., Tenn.
W. S. Canthen, Pleasant Hill, Lancaster Co., S. C.
J. G. Taylor, Austin, Travis Co., Texas.
J. H. Burrage, Concord, Cabarrus Co., N. C.
Fischer & Stehle, Marietta, Washington Co., O.
Oliver Foster, Mt Vernon, Linn Co., Iowa.

Queens reared in 1881.

The undersigned are prepared to mail dollar queens *during this month* for $2.00 each. See conditions in the opposite column.

Chas. S. Larkin, Raceland, La Fourche Par., La.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Michigan,

would be pleased, upon request, to send you his circular and price list (printed on the cheirograph) of Italian queens and bee "fixin's." 4tfd

Bee-Hives at Cost!

To close out my stock of Simplicity bee-hives, I will sell at cost for 30 days. Will take a few colonies of bees in exchange for hives. For further particulars, address CYRUS McQUEEN,
4 Buena Vista, Tuscarawas Co., O.

PURE BRED POULTRY.

I am now prepared to fill orders for eggs from the following: P. Rocks (Corbin strain), L. Brahmas, S. S. Hamburgs, S. S. Polish (Bearded), Brown Leghorns, W. C. B. Polands, Rouen and Pekin Ducks, Toulouse Geese and Bronze Turkeys. Eggs packed in the most approved manner. Poultry for sale in the fall. Send for Price List. Address
4-6 H. S. ROSS, Box 128, Seville, Medina Co., Ohio.

An Italian Queen

FOR **15** CENTS.

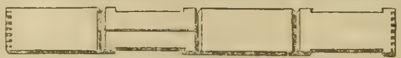
We guarantee to every one who sends a dollar for the *American Bee-Keeper*, to send a pure untested Italian queen.
4-7d E. M. HARRISON, Lebanon, Laclede Co., Mo.

PURE STOCK! I shall devote the coming season to rearing *HOLY-LAND QUEENS* for sale. They will be reared in an apiary by themselves, away from other bees. The price will be as follows:—

Dollar Queens, before June 15,	$1 25
Each, after that date,	1 00
Tested Queens, after June, each	2 50

Safe arrival and satisfaction guaranteed.
3-8d I. R. GOOD, Nappanee, Elkhart Co., Ind.

SECTIONS AND HIVES!



We will make the dovetailed, or "Boss" One-Piece Section, any size up to 5x6 for $5.00 per 1000. Material for L. hive, 50 cents.
JAMES FORNCROOK & CO.
Watertown, Jeff. Co., Wis., March 1, 1881.

Take Notice.—Patent pending on the "Boss" One-Piece Sections. 3d

Honey Plants and Small Fruits!

By mail, postpaid.	cts.
10 Catalpa Seedlings, best honey-yielding forest-tree known	25
20 Box-Elder Seedlings, blossoms very early, splendid for bees,	25
15 Turner Raspberry, great honey-plant, fine fruit	25
10 Mammoth Cluster, Doolittle or Davidson's Thornless Black Cap	25
2 Doz. Crescent Seedling, W. Albany, or Chas. Downing Strawberry	25
1 Doz. Sharpless Seedling, fine, extra large variety,	25
1 Doz. Concord or Hartford Grapes,	90
1 Doz. Snyder Blackberry, never winter-kills	60
1 Package Catalpa Seed, grown as easily as corn	15
15 Cuttings, Gray or Golden Osier Willow, both bee-trees	25

Send for Catalogue to H. M. MORRIS,
4d Rantoul, Champ. Co., Ill.

KIND WORDS FROM OUR CUSTOMERS.

I make money by taking GLEANINGS.
MRS. W. W. WILSON.
San Bernardino, Cal., Feb. 25, 1881.

Your cheap counters are *wonderful.*
ADA JENKINS.
Dermott Station, Ark., March 9, 1881.

The Simplicity cold-blast smoker pleases me much.
JONATHAN MIDGLEY.
Wales, Sanpete Co., Utah, Jan. 15, 1881.

I think the books are a marvel of goodness and cheapness.
ABRAM MELLIGER.
Soudersburg, Lanc. Co., Pa., Jan. 26, 1881.

The smoker and Journals came in good time. Never was so much pleased with anything coming by mail. The smoker suits me exactly.
W. L. STILES.
Austin, Travis Co., Texas, Feb. 26, 1881.

THE BARNES SAWS, ETC.

As we have received goods several times from you, and always found them satisfactory, we do not hesitate to take the watch on your representation. The Barnes saw we received through you still gives entire satisfaction; we use it every day,
CHAS. P. CULP.
Hilliards, Franklin Co., Ohio., Feb. 18, 1881.

God bless you in your endeavors to do good for the Master and to your fellow-men.

I think more of your Home Papers than all the rest of your journal. If more men would take God into business with them as a partner, there would be less failures than at present.
H. M. SMITH.
Frankfort, Mich., Feb. 10, 1881.

I received the Waterbury watch all right. Please accept thanks. To say that I am pleased with it, does not fully express my feelings in regard to it. It gives me more pleasure than any watch I ever carried, and I can heartily recommend it to those who wish to get a good watch for a small sum of money. I do not see how it can be sold for such an insignificiant price.
CHAS. F. DODD.
Nile, Ont., Canada, Feb. 15, 1881.

I little expected, when I wrote to you last spring for a copy of your bee books, that I should be disappointed; but I must say that I have been, but it is not a disagreeable one, by any means, on the A B C that you sent. It seems to me as if I were listening to the talk of a man who understands what he is about. I have kept bees more or less for the past 30 years, and must say that I have known but little, and that little I'm ashamed of. I have learned more since I've been taking GLEANINGS than I knew or learned ever since I handled bees. I like GLEANINGS well, and say that it is well worth $2.00 instead of $1.00. The A B C, as a book of reference, is worth 100 times what it cost. I would not take that amount in hard cash and do without it. GLEANINGS gives me first-rate satisfaction. You might make it more so if you would add to it "What to Do this Month;" or, "The Work to be Done this Month." It would give us green ones (I must say it, if it *does* go against the grain) a chance with you experienced ones. I for one am willing to learn. It would help, and a little help goes a long way sometimes, if applied in the right place.
W. C. BURTCH.
South Jordan, Ont., Can., Nov. 22, 1880.

KIND WORDS TO OUR CUSTOMERS.

Please, friends, do not be so backward in asking me to take your word. When I doubt you, I will tell you so. Can you not keep this in mind? One friend took the pains to go seven miles to the post-office to mail back a cage of dead bees and queen where a postal card saying they were all dead would have answered every purpose. Write to me as you would to a brother, telling me the state of affairs, and I will believe you, I assure you. Please do not send any thing back until you have first written. If there is any one thing that is lacking in business matters, to make things go on harmoniously, I should say that one thing is charity, and faith and trust in each other.

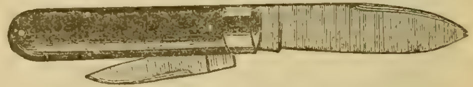
Recent Additions to the
COUNTER STORE.

FIVE-CENT COUNTER.

Postage.]		[Pr. of 10,	of 100
5	Can Opener, cuts out a round piece ..	43	4 00
3	Match Safes, double, for both burnt, and unburnt matches.....	38	3 50
4	Pans or Basins, extra deep, 1½ pints a very useful size, three for a dime..	28	2 00
2	Wardrobe Hooks	38	3 50
	Neat and strong, and can be put up by any woman, even in a plaster wall.		

TEN-CENT COUNTER.

6	Bread-Knife, very pretty; finely finished, and a good steel knife 11 in. long	85	8 00
2	Clock-Cord, 30 hour; best linen; per bunch	95	9 00
	Dippers, tin, called 2 qt., but really about 3 pts., but a splendid large dipper for a dime	85	8 00
2	Handk's, Japanese paper, 10c per doz	95	9 00
2	Handkerchiefs, Cambric, Gents' size; fine and beautifully figured, 3 for 25c	65	6 00
12	Pans, stew, with handle; called 2 qts., but really 3 pts..............................	75	7 00
5	Papeteries	95	9 00
	Juvenile, 24 sheets of paper, and 24 envelopes. Just the thing for the little girls and boys who write for GLEANINGS.		
4	Punches, Machinists, Center..........	95	8 00
2	Primer, one-syllable, 100 fine pictures	85	8 00



Only 10c – Just look at it, Boys!

2	Knives for boys, Two-bladed; although the blades are not American make, they are steel, and a wonder for 10c	95	8 50
2	Silk Handkerchiefs; *wonderful for a dime*, but not *all* silk.................	95	9 00
3	Envelopes, Bunch of 25, such as we use*	75	6 00

FIFTEEN-CENT COUNTER.

	Axle Grease, Dixon's best*............	1 20	11 00
2	Clock Cord, 8-day; best linen; per bunch	1 35	13 00
10	Half-Gallon Measure; tin, with lip; *exact*	1 25	10 00

Twenty-Five Cent Counter.

36	Camp or Lawn Stools; well made of ash lumber, and put together with screws................	2 25	21 00
9	Papeteries	1 75	16 00
	Containing 24 envelopes, and 24 sheets paper, good.		
2	Pencil, automatic......................	2 00	18 00
	With copying lead. This pencil has been a great boon to me. It writes very easily, and makes a plain purple mark that will copy as well as a copying ink if desired.		

Thirty-Five Cent Counter.

	Honey Cups, also good for syrup, so made that it *can not possibly drip*..	3 50	30 00
26	Hunter's Sifter. The regular price is 75c. A rotary flour and meal sifter, mixer, scoop, measure, weigher, egg-beater, rice-washer, pumpkin, tomato, starch strainer, etc. Mrs. R. says, she never knew any thing could be made so handy	2 80	25 00

HUNTER'S
SIFTER
ROTARY

Seventy-Five Cent Counter.

6	Saw-Frames, Jewelers'; spring steel	6 50	60 00
	Beautifully polished, and nickel-plated, with rosewood handled.. Will hold a saw from 1 to 6 in in length.		
52	Wrenches, Coe pattern; malleable; black; 15 in. long. Extra heavy and strong	6 50	60 00
9	Moody's Best Thoughts and Discourses..............	6 00	50 00

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES AND HONEY, AND HOME INTERESTS.

Vol. IX. APRIL 1, 1881. No. 4.

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.
Established in 1873.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE. Clubs to different postoffiecs, NOT LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

NO. 17.

REARING QUEENS OUT OF SEASON.

IN my article on late queen-rearing I wrote as follows: "I think that he (Doolittle) will admit that we queen-breeders have greater facilities for learning facts in regard to our specialty than has the bee-keeper who raises honey." After reading the above, and then reading my report in the Jan. No., friend Doolittle was almost inclined to laugh, because he says, "Facts would show that Doolittle raised four times as many queens before Hutchinson ever went into the business as friend H. has in all his life."

I have kept bees four years, and have reared 700 queens; and if you, friend D., reared 2800 in the 8 years previous to my commencing the business, you must either have destroyed a good many queens, or else, considering that you did not advertise queens for sale, you must have disposed of a goodly number. As your average number of stocks each year has been 48, you certainly would not use 350 queens each year in your own apiary. But even if you did "raise four times as many queens," to be candid about the matter, did you, for three seasons, as I have done, make a specialty of rearing queens late in the season, feeding the bees when no honey was coming in, having the cells built in full, strong colonies, giving the young queens to full colonies so that they could lay a spell before cold weather set in, and then let these late-reared queens have a fair chance the next season? If you have done so, and found them to be inferior, I can only say that my experience does not agree with yours. I am thankful, friend D., that you are going into the queen business, because we can, some of us at least, have an opportunity of testing your "natural," "summer-bred" queens for ourselves.

You say, friend D., that my illustrations about not following nature do not touch the point. I am aware that the illustrations given are not exactly parallel cases, neither were they intended as such; they were given merely to show that better results are sometimes obtained by not letting Nature have her own way. Of course, the illustration would have been better had I chosen parallel cases, and I thank you for calling my attention to it, and I also feel under obligations to you for so neatly remodeling one or two of my illustrations until they *were* parallel cases. I have reference to what you said in regard to rearing chickens, lambs, colts, etc., late in the season. Not having very much experience in rearing fowls, or stock, either in season or out, I wrote to about a dozen breeders of poultry, sheep, and horses, asking them whether it made any difference in regard to the health, strength, size, vitality, or future usefulness of a fowl, sheep, or horse, as the case might be, if it was reared late in the season, instead of at the usual time. Most of them, thinking that I wished to go into the business, wrote long letters, giving some excellent advice. Their replies were somewhat conflicting, and all of them were conditional. One breeder said: "Stimulate your fowls, and get them to laying and rearing chicks as early in the season as possible; early-hatched chicks are much the best." Another breeder said: "Some varieties are benefited by a late hatch, but not later than September, unless you can give them special care." Still another said: "It is not so much that a bird is hatched out of season; more depends upon the care that it receives." One sheep-breeder said: "I do not know the entire object of your question, or I might answer it in one word, *no*." Another breeder said: "Lambs dropped in the fall are not weaker than those of spring; but, as a rule, to the contrary, as the exercise of the dam at this time of the year in quest of her food naturally gives strength to the lamb at birth." Another said: "Care and conveniences may effect all the advantages of either time." Still another said: "I should *greatly* prefer spring lambs, as it seems more natural for them on grass; but should lambs be dropped in the fall, and you can give them proper care, I do *not* think it would hurt their usefulness as breeders." I have, as yet, failed to elicit any response from horsemen. Of course, I can not give even extracts from all of the letters that I received, but the idea that most of the writers tried to convey was, that the season of the year when a creature is brought into existence is of less importance than the care that it receives; that is, as regards its "health, strength, size, vitality, or future usefulness."

Are you not just a trifle sarcastic, friend D., when you ask me to rear queens in mid-winter? You know I have never claimed that *good* queens could be reared at any *time* of the year. You claim that good queens can not be reared after about Aug. 20th, while I claim that, by proper care, they can be reared nearly if not quite two months later, or as long as warm weather lasts. Nevertheless, as an experiment, I would try rearing some in the winter, if they could be fertilized. You seem to think, friend D., that if I had my choice I would prefer, *for my own use*, queens reared in June and July. According to *theory*, I should choose the summer-bred queens; but, as I go to choose, these facts stare me in the face: Each spring, for the three past years, one-half of my stocks have been "mothered" by these late-reared queens, and they have done fully as well as the ones that had queens reared in June and July. Perhaps you will say that *all* of my queens may be "poor sticks;" well, perhaps they are; but if such is the case, why do I obtain, on an average, more honey per colony than my neighbors, and rear on an average 20 queens per colony *in the bargain?*

But why, friend D., do you use the words "*for my own use*," and then put them in italics too? Do you mean to insinuate that I would rear queens to sell that I would not keep for my *own* use? If you do, let me say (although I know it sounds like advertising in the reading columns, but I can not help it), that I have never knowingly sold a queen that I would not keep for my own use. No, friend D., I am not like the breeders of whom you bought some dollar queens, who would like to rear the queens for you, *when he reared his own*. I do not rear queens one way for the "little bugs," and another way for myself and the "big bugs," for fear the "big bugs" might "tell," if I sent them poor queens, and thus spoil my reputation. If a queen-breeder should write to me, friend D., as that one did to you, I would have nothing to do with him, and I should be strongly tempted to give his name to the public as a fraud and swindler. W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

I fear, my friends, we are getting into almost too much of an argument on this question; but as a healthful, wholesome, and friendly rivalry may be productive of good, I have thought best to let it go on. Shall we not drop it right here, and let the queens themselves, reared by both our friends, do the talking? Quite a lot of us want Doolittle queens, and we are going to report fully in regard to them, as we also shall in regard to those reared by friend H. and other breeders.

WHAT SHALL THE FRIENDS DO TO START AGAIN, WHO HAVE LOST ALL THEIR BEES?

ALSO, WHAT SHALL BE DONE WITH THE HONEY, HIVES, AND EMPTY COMBS?

ALTHOUGH I answered these questions in our Feb. No., it seems I was not sufficiently explicit. I am grateful for the confidence you have expressed in coming to me, and for the willingness with which you send me money; but I think you can do better by not intrusting it all into my hands, and it is because of this I write. If you have any bees left at all, build up, by the directions I have given you in the A B C, and get bees in your empty hives and combs. Close your hives up so you are *sure* no robbers can get in at the honey, and they can generally be left safely on their summer stands, until about the usual swarming time. Clean out the hives, brush off the dead bees, and when you put the combs back, spread them a little apart so they do not touch each other, and then look at them occasionally until they are used.

Do not fuss much with soiled combs, or those containing dead bees. Just set them, one at a time, in the center of a strong colony, in May or June, and the bees will fix up the worst comb you ever saw, so quickly you will hardly know how it is done.

If you can get bees on all the combs a month earlier, it will be better; but there is no need of losing any combs by the moth, if you keep a little lookout for them. If the combs can hang a couple of inches apart, they will be less liable to injury. You can generally effect this by removing all division-boards, and spreading the combs out.

WILL A LB. OF BEES, AND A QUEEN, BUILD UP TO A GOOD COLONY WITHOUT ANY BROOD, IF PUT ON EMPTY COMB, SAY IN APRIL, MAY, OR JUNE?

This is a question that has been asked a great many times; but to be frank, I do not know that I ever tried it. If the bees are young Italians, I should have no fear but that they would, but very much would depend upon who had the care of them. A friend in Michigan with hives of empty combs, once built a single colony up so as to make 30 of it in a single season. On the other hand, a neighbor's boy once bought a fair-sized nucleus of us, early in the season, and failed to build them up so as to winter, during the whole season. I can not tell what you can do. A pound of bees in our hands, in the month of April, would make a most rousing colony before the season was over, and I am quite sure we could make three or four colonies of it if we chose. If you wish, I will sell you the queen and bees, but I do not like to say what you can do with them. If you can give them a frame of brood, or even one only partly filled, it will be a great help to them and the queen. If you have not this to give, they should, if they do fairly, soon have it by their own work.

COST OF A LB. OF BEES; AND, WILL IT PAY TO BUY THEM?

As you will see by our April price list, 1 lb. of Italians is worth, in April, $2.00; in May, $1.50; in June, $1.25, and in July, $1.00. If you can buy common bees in box hives, or any other kind for $5.00 or $6.00, perhaps you had better buy them, and buy Italian queens to put with the bees. I bought natural swarms of bees last season, that weighed *six* lbs., and at these prices the bees alone were worth, in July, $6.00. Now, if you all insist on coming to me, I shall have to buy bees to fill this enormous demand. Somebody will have to pay the express charges here, and another charge back to you, whereas if you would buy them directly of the producer, but one charge would have to be paid, and but one risk to run. Again, if we put a lb. of bees in a hive and let them fly a week, they will, at the end of that time, have gone down to probably ¾ of a pound or less. There is a loss every time they are handled, and more especially is it the case with old bees. A new swarm will often lose nearly a half in weight in the first ten days.

Send to the nearest person who advertises bees by the pound. Get some good prolific queens, either black or hybrid, if you can not get Italian, and just bend all your energies toward making them increase and multiply. If you are short of funds, use hybrids; feed whenever there is a dearth of pasturage, and next winter get ready to try wintering again, on a few strong colonies well fixed up, for just such another winter as we have just had.

THE CYPRIAN BEE.

SOMETHING FROM MR. LANGSTROTH IN REGARD TO THE MATTER.

AT last we have ample means for judging of the temper of this bee, as shown in their native island, where no questions can be raised as to their absolute freedom from mixture with other varieties. In a private letter to me, Prof. Cook, of Lansing, says of Mr. Frank Benton, who has done this good work for us, "He is scientific in his methods and habits, very earnest and enthusiastic, and honest to the core." Writing out of his large experience with them, in a season so unfavorable for honey-gathering that, if they possessed any unmanageable irritability it could not fail to show itself, Mr. Benton gives them the palm, even over Italian bees, for easy control in all necessary manipulations.

Two years ago Mr. Muth, of Cincinnati, after weighing all that our German friends had to say about them, agreed with me in doubting whether their decided merits in most respects were not more than counterbalanced by excessive irritability. Mr. Benton's explanation of the simple methods by which they may be kept peaceable has dissipated these apprehensions,* and I am strongly inclined to think that we have been fortunate enough to secure a strain of bees which unites the best qualities of both the blacks and Italians. After a large experience for many years with the last-named races, I came to the following conclusions:—

(1) *Where late forage is scarce, the Italians stop breeding much earlier than the blacks.*

In Oxford, where, after the second crop of red clover fails, bees usually gather less honey than they consume, the Italians, unless artificially stimulated, raise so little late brood that they go into winter-quarters with too few young bees. Under the same conditions, the blacks breed quite late in the fall, rarely ceasing until after severe frosts, and often persisting in it when they have not honey enough to last them for more than a few weeks. Now, the evidence is quite conclusive that the Cyprians, like the blacks, are strongly given to late breeding.

(2) *The Italians, unless stimulated by judicious feeding, do not resume breeding as early as the blacks.*

In Greenfield, Mass. (see p. 339, 3d ed. of my work on the hive and honey-bee), where I had only blacks, the December of 1846 was extremely cold. Jan., 1847, was the coldest January on record, in that latitude, for more than fifty years. Once the temperature was 30° below zero, F., and there were two days when the wind blew a strong gale, the mercury getting but once as high as 6° below zero. From the 7th to the 14th the mercury was, one-half of the time, below zero, and only once as high as 10° above—the wind blowing an almost continuous gale. Early in the forenoon of the 14th, the mercury was 10½° below zero. Later in the day it moderated enough for me to examine three strong stocks, in the central combs of all of which I found eggs and uncapped brood, and in one of the stocks a little capped brood. On the 30th of that month the central comb of one of these colonies was found to be almost full of sealed brood, nearly mature. My experience with black bees led me to expect breeding to begin in good stocks about the 1st of Jan., and sometimes a little earlier.

In my Italian apiary at Oxford, where the mean of the winter is very little lower than the mean of March in Greenfield, I seldom failed to get an opportunity of overlooking my stocks some time in February, and rarely found much brood in that month, even in the strongest; while in most of them, laying had not even begun.* The present winter here, though unusually cold, does not compare for severity with that of 1847 in Greenfield, and there have been three thaws causing the resumption of navigation on the Ohio River. Two of my neighbors, the Messrs. McCord, examined, on the 11th of this month, a large number of stocks, some of which were very strong, and in only two was brood in any stage noticed. While it is very true that a small colony of Italians, when breeding fairly begins in the spring, will, as a rule, rapidly outstrip a black one of equal strength, is it not equally true that what is called "spring dwindling" among Italians may in many cases be attributed to the above-mentioned causes? In localities where the main honey harvest is over on or before the middle of July, early breeding is essential to success, and with Italian bees, artificial stimulus must ordinarily be used to induce it. Some of the readers of GLEANINGS may remember my experiments in this line two years ago, interrupted by the return of my old malady.

Thus far, all the experiments with Cyprians, which have come to my knowledge, show that in their propensity for both late and early breeding, they resemble, even if they do not surpass, the blacks. In the *A. B. J.*, Feb. 2, 1881, Melville Hayes, of Wilmington, Ohio, writes, under date of Jan. 3d, of his Palestine bees: "To-day I opened the hives and found brood in all stages from the egg up, in six frames." I presume that the Holy-Land bees will be found to resemble very closely the Cyprians. In this connection, I will mention the curious fact, that, some years before the Egyptian bees were introduced into Europe, many of the workers of one of my Italian queens had the peculiar crescent-like markings of the Cyprian, Palestine, and Egyptian bees. After importing the Egyptian bees, I could easily agree with Vogel, that the Italian is a cross between this bee and the black. Mr. Woodbury's hard experience with the Egyptian bee in England may easily be accounted for by supposing him to have attempted to handle them just as he did the Italians.

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*It may be well to caution those who keep bees very near to public highways, to be careful to observe Mr. B.'s directions; and if they have had but little experience with bees it may be as well to let them alone, rather than run the risk of rousing them to fury.

*I have repeatedly noticed that, a day or two after examining colonies, either in the fall or spring, which had no brood in any stage, their queens would begin to lay, the disturbance which caused the bees to gorge themselves with honey having the same effect as the stimulus of food. Where colonies are well provisioned, occasional examinations might do almost as well as feeding.

(3) *The Italians are much more inclined to build drone comb than the blacks.*

When forage is abundant, if an empty frame was placed between two full ones, my experience with the blacks led me to expect them to fill it with worker comb; and if their queen was one of the current year, I could count upon this with almost absolute certainty; while, under the same conditions with Italians, drone comb was the rule and worker the rare exception. The Italians, instead of filling the empty frame, often occupy the vacant space by bulging out the other combs; and if the honey in them was capped over, they would sometimes build another tier of cells right upon the cappings of the old combs! Time would fail me to describe my various experiences in trying, when forage was abundant, to induce Italian stocks to build worker comb; and it was only by a very free use of the extractor that, toward the close of my career as an active apiarian, I was able to secure—what cost me no trouble with the blacks—a sufficient supply of worker comb. By the use of comb foundation we are now much better able to remedy this defect in Italians.

Having now mentioned some of the points in which the blacks are manifestly superior to the Italians, and reserving others for future discussion, it must be evident that the Italians must have some extraordinary advantages, to give them the preference among our leading bee-keepers. These I propose also to notice in another article.

From all that I can learn of them, the Cyprians seem to have in high perfection some of the very best qualities of the blacks and Italians; and unless Mr. Benton can find something still better for us in Asia we may well congratulate ourselves on its introduction in undoubted purity into this country. All honor to Mr. D. A. Jones, of Beeton, Canada, whose extraordinary energy and experience in the management of bees, and large expenditures, have done so much, and promise to do so much more, to secure for Europe and America the best race of bees, or the best cross between different races, that the world can give us! Without Mr. Jones, Mr. Benton might have longed in vain for such golden opportunities; and we should be still groping in the dark, as we have been for so many years, talking and planning "how to do it," but still ever so much further off than we now are from the desired goal.

The Holy-Land bees procured by Mr. Jones' personal visit to Palestine will probably be found to have the same good traits with the Cyprians, and to be much nearer allied to them in size and disposition than to the Egyptian (*Apis fasciata.*) Mr. Jones himself gives them the preference, and it may be that our most valued bees shall come to us from that promised land, flowing in milk and honey! As the Italians are doubtless a cross, there is not much to be expected by mixing their blood with the newcomers.

For the present, I will close by urging *great caution* on both buyers and sellers. It is well known that tested Italian queens have been advertised, not only by parties having insufficient experience in queen-breeding, and without adequate arrangements for keeping them pure, but from those who have bred from very poor hybrids.* Reliable breeders will find it much to their advantage to inform the public from whom they procured their original stock, and why they can safely guarantee the purity of the queens they offer for sale. If these precautions are not attended to from the start, we must expect to have "confusion worse confounded" by an ever-increasing medley of bastardized bees.

Oxford, O., March, 1881. L. L. LANGSTROTH.

POLLEN AND DYSENTERY.

NEIGHBOR H. has some bees a few miles in the country, which gathered such quantities of pollen that he had whole combs filled with it. Some of these combs were put in good colonies, to enable them to raise brood in the winter. All these bees are so badly affected that H. says he will never more put in pollen until we have spring weather.

CYPRIAN AND HOLY-LAND QUEENS.

As it is just as easy to raise Cyprian and Holy-Land bees as any other, I believe the general tendency is to offer them at the same prices as Italians. As the difference is so slight between them and the Italians, of course it will be impossible to tell those crossed with Italians from those that are not. We shall, therefore, have to call those pure that show no traces of black blood, unless kept in an apiary by themselves, as neighbor H. has them.

ONE-POUND HONEY-TUMBLERS.

PLEASE do not scold, friends, when I make a mistake in my intentions of doing you a favor. You see, I found some very nice glass tumblers that I could buy for only 28c. per doz., and I found we could make tin tops for them at about a cent apiece, so I advertised honey-tumblers at the very low price mentioned in Feb. No. When the tumblers came, it was found no two of them were exactly of a size, and so we were obliged to have them all sent here, unpack, fit the covers, box them up again, and re-ship. This has made it necessary to advance the price to $3.00 per box of 6 doz., to cover expenses.

HONEY-LABELS.

PERHAPS more than one of you have remarked that our labels on cans of honey do not begin to compare with those on other canned goods. In view of this, I have had some large labels made by a label maker, for canning establishments, and, to my surprise, I find that a label 4½x12 (large enough to go clear around a 2-lb. can), printed in five bright showy colors, can be had for only 25c. per 100. Of course, at this price the address and source of the honey is left blank; but we can print this in for 25c. more, per hundred; 75c. more for 500, or $1.00 more for a thousand. If wanted by mail, the postage will be 3c. per 100. These labels are just the thing for any kind of tin pails or cans, but might be objected to for glass, because they cover almost the whole of the can or jar. Samples of these new labels will be mailed free on application.

FOUNDATION MADE FROM RUBBER INSTEAD OF PLASTER PLATES.

We have been hard at work on the problem, for the past month, and have succeeded in making plates of pure elastic rubber, that will make fdn. better, and even faster, than plaster plates, while the introduction of any foreign substance does not injure them in the least. Nothing seems to be in the way of making fdn. right in the wired frames, although we have not done this as yet. The sheets turned out are perfectly trimmed the size of the rubber plates used. A pair of plates to make fdn. to perfectly fill an L. frame (8½x17⅝) will at present cost $5.00, and other sizes in proportion. If mounted and hinged, ready for work, the price will be $7.00; the whole apparatus, including wax boiler and fountain, as perfect as we are now able to make them, will be $15.00. You can now have them to make any kind of fdn. you choose, by sending us a perfect sheet. A metal plate has to be made, to work the rubber on, and as this metal plate has to be a perfect copy of the wax sheet, this is where the expense comes in. By applying pressure, the wax can be nearly all forced out so as to leave only a net work of walls. The suggestion of using soft rubber came, I believe, first from Mr. Gray. We have not, as yet, made plates larger than about 4x6 inches. We may be able to make the price lower, after a while, but so far it has cost quite a little money out, in the experiments.

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*A mere tinge of yellow has often been made to give golden hue to some very black transactions.

TRIGONA, OR BRAZILIAN STINGLESS HONEY-BEES.

AS the stingless honey-bees are causing some excitement in America just now, by Mr. W. S. Hawley, of Rochester, N. Y., trying to form a "Stingless-Bee Association," and to get hold of ten dollars from bee-keepers, and as he states he never heard of these stingless bees until lately, I send you an account of my stingless bees, as they are the only ones that ever arrived in England alive.

These bees came to England in a hollow piece of logwood, from Honduras; and when being unloaded at Manchester, on Saturday, July 17th, 1869, the nest fell out of the hole on to the ground, and was carried into an office and placed on the desk. When they came to the office on the Monday morning following, the desk was found covered with the bees (but at first they were thought to be ants.) The gentleman in whose office they had been placed, being a scientific man, placed the bees and their nest in a box which he covered with glass, and knowing that I took such a great interest in bees, brought them out to me at Newton Heath.

As I had never seen any of these *Trigona* bees before, I sent some of the live bees, with a piece of the brood comb in which young bees were just being hatched, also a section of the nest containing honey-pots filled with pollen, etc., to the late Mr. Frederick Smith, of the British Museum, late President of the Entomological Society, and one of the Vice-Presidents of the British Bee-Keepers' Association, he being one of the greatest authorities we had in Great Britain on hymenopterous insects. Mr. Smith kindly wrote to me, saying, "The bees sent are the Brazilian honey-bees belonging to the genera *Trigona;* they being exotic, I do not imagine it will be possible to propagate them here. They do not construct honey-cells, but honey-pots; as you have the brood, the most important thing you can attend to is to *secure the queen.* I once obtained one from a brood sent from Brazil in spirit. I can not find that your bees are a described species, as it is not in the British Museum. You will have ascertained that these bees are the stingless bees of South America; they are found also in India and the Islands of the Eastern Archipelago."

The nest of the *Trigona* is nearly the color of logwood, with a smooth, hard, outside casing, in shape the same as the size of hole in the logwood, which measured 8¼ inches long, and 5 inches wide, and about 1½ in. in diameter; each of them nearly round, but joined together. The nest and insects weighed 7¼ oz., and the pots are filled with pollen and honey, which is of greenish color,—thin, and tastes sour, or like fermented honey. The brood combs contained brood in all stages of development.

On August 17th, the thermometer went up to 98 degrees in the sun, and the *Trigona* were very busy flying about in the box, so I placed it in the garden and allowed a number of the bees to fly out; but I did not see any of the bees return to the box, so I concluded they must have lost their queen, otherwise they would not have deserted her; and this afterward proved to be the fact.

As the brood combs when brought to me contained eggs and brood in all stages of development, the queen must have been in the nest within a day or two from that time, so I think she must have got lost when the nest fell out upon the ground, or that she swarmed with the bees when left on the office-desk, and got lost. So the bees gradually died away; but I think I could have kept them in a warm room over the winter if they had not lost their queen.

It was very amusing to watch these beautiful active Lilliputians, as they were constantly brushing themselves and smoothing the hairs on their body with their hind feet, and sometimes with four feet at once, holding on with the two fore feet. I have no doubt they thought themselves great dandies, being so very particular about their dress. At night they all returned into their nest. These *Trigona* were nearly shining black, less than 3-16 of an inch long, with wings of rainbow colors longer than the abdomen. I have had a number of them dissected and mounted for the microscope.

These were the only *Trigona*, or stingless bees, that ever arrived in England alive; the late Mr. Woodbury tried to import these bees into this country, and a nest was sent to him from Australia, which is now in the British Museum. The brood was fed with honey and water, but they all died before they arrived in England. WILLIAM CARR.

Newton Heath Apiary, Near Manchester, Eng.

(To be Continued.)

FRIEND CARPENTER'S IMPROVEMENT ON THE PEET CAGE.

I RECEIVED the Peet cage all right; very much obliged for the same. After looking the Peet cage over I went to work and made a cage for which I will send you a model for your inspection. I have added a quill for water. If it becomes necessary to use water in the cage, put the water in the quill with an oiler, then take an apple or a potato, cut in slices ¼ inch thick; push the quill in one of these slices till the quill goes clear through. This makes the stopper. Take a wire the size of those that are at each corner of the cage to fasten the cage to the comb. Take a like wire and punch a hole in the stopper of the quill; this will let the water out just as fast as the bees lick it off the stopper. You can put 3 or 4 quills of water right in the cage with the bees, by running a wire over or across the cage over the quills to keep them in place. As the ventilators are open on both ends, it don't make any difference in what position the cage is; they can get air. It is not very apt to have both ends shut at the same time in the mail pockets.

I have also made a half-inch hole in the tin slide to put the bees in at, by raising the slide till the hole just comes above the candy-box.

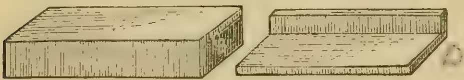
Well, friend Root, if you can improve it any after looking it over, just tell us how to do it. We won't grumble a bit, but thank you for so doing. I think there is still room for improvement; but I can't just see it now; but just as soon as I see that it can be improved, I will send you a model.

H. F. CARPENTER.

Polo, Ogle Co., Ill., March 1, 1881.

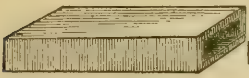
Friend Carpenter has given us one idea in the above, that is so simple I almost feel ashamed to think I never thought of it. It is the use of a quill for a water-bottle. I have often wished for some thing as substantial as tin, and as clean and transparent as glass, but supposed it out of the question. I would suggest taking large quills, and cutting them off so as to have both ends closed. Now take off just the point of the quill, draw out the silk, and you have a bottle complete, that can be filled on our plan with the oil-can, which will always keep the water pure and sweet, and will never leak, although it lets the bees sip at their pleasure. Two quills, pointing in different directions, will make the water always accessible.

Now, friend C. has another very ingenious idea, and I opine it will be of great value for other purposes besides making queen-cages or boxes. Suppose you have a block 1¼x2½x5, for this is the dimensions of the one he sends. Well, we will first make the block in two pieces by making two saw-cuts on the dotted lines as follows:—

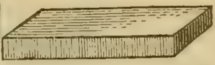


BLOCK OF WOOD FOR QUEEN-CAGE.

After A is removed, place B on the saw, and cut out the center so as to leave D. Place A and D together again, and nail with slim wire nails; now dress off, and you will have C, as shown below.

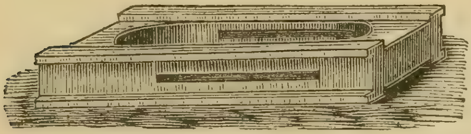


CASE FOR THE CAGE.

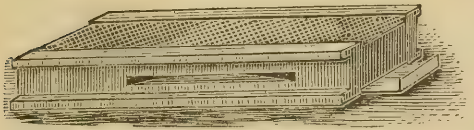


BLOCK FOR CAGE.

If B does not slide nicely into C, dress it a little until it will. Now by boring a large hole near each end of B, with one of our expansive bits, and cutting out the wood between, we have a nice little sliding box for a queen-cage, or other purpose. To make a queen-cage of it, friend C., with suitable cutter-heads, cuts shallow grooves on each one of its four faces, as below.



CAGE PARTLY MADE.



CAGE COMPLETE, READY FOR THE CASE.

Wire cloth is tacked on one of the faces, and the tin slide on the other, as given last month, and the narrow slits have a ventilating hole run in with a saw. This last slot will also hold a quill for water, on each side. To hold the cage up against the brood comb, wires are put in that lie in the side grooves, when the cage is pushed into the case. This makes a very strong, safe shipping-cage, and is also very easy to open and close; in fact, much easier than the form we gave last month, although it is somewhat more expensive; yet where a great quantity are made by machinery, I think they can be sold at the usual prices. The candy is held at one end, and a thin slip of wood, almost a shaving, in fact, keeps the candy from touching either the wire cloth or tin slide.

LETTERS FROM FRANK BENTON, FROM THE ISLE OF CEYLON.

APIS DORSATA; A SINGLE NEST OF BEES FURNISHING HONEY ENOUGH TO LOAD THIRTY MEN.

THE following letters were forwarded me by the kindness of friend Jones, to whom they were written, by our friend Frank Benton. I presume more than one heart will be stirred by an ambition to go and explore too, by reading over the accounts of his adventures. Hold steady, boys; it takes "a mint o' money" to do this work, and I presume friend Jones will have it done pretty thoroughly. We can help him bear the expense, if we choose, by buying his queens.

I have made every effort to secure bees here, but none are kept in hives in those parts I have visited, and I do not think in any part of the island. Of those found in trees, few can be secured, because the trees are valuable cocoanut palms, and the entrance holes are in the trunk, and are, of course, very small. I have gathered three hives only of the small bees, having also spent some time fixing up the bees I brought with me, and trying to find the large bees, to say nothing of searching for some place where bees could be purchased in hives or pots. These natives are far worse than Cypriotes to get along with and accomplish any thing. They seem to tell lies simply for the sake of giving an answer, even when no pecuniary gain could come to them. Again, they seem to wish to avoid, in all instances, saying, "I do not know," when the Lord knows it would be the most appropriate thing for them to say in ninety-nine cases out of a hundred. The result is, that it is hard work to sift the statements made by natives and Europeans. Nearly all the English know absolutely nothing of value to us. The new bees, which I think are also found in India and many of the East India Islands (in which case, East-India bee would seem to me to be an appropriate name), are real beauties. The workers are ⅜ of an inch long, and build worker comb ⅝ of an inch thick, 36 cells to the inch (that is, 72 on both sides;) the drone comb is exactly like worker comb made by the bees already in Europe and America. The workers are brown, with a very ringed abdomen, the bands to the tip of the bodies being broadly marked with yellow, and the thorax very fuzzy, with a large shield between the wings. The drones are black, inclining to a blue black, and are ½ inch long; queens leather-colored, and large, compared with workers. These bees are very active, wonderful brood-rearers, regular little beauties, and can be handled without the least smoke, scarcely ever offering to sting. It is a pity I can not get more of them in the time I have here.

I am bound to find out whether *Apis dorsata* is found here or not, if time will permit, and if two more races I have heard of here really exist or not. I am now where a few shillings' railway fare will bring me to the interior of the island. More by next mail, with samples of bees and combs. I had one horrible time, getting stung with large hornets while in the jungles. It laid me up for one whole day. They are fearful fellows—worse than those in Cyprus. FRANK BENTON.

Colombo, Ceylon, Jan. 24, 1881.

He writes again later:

I have seen two native races of bees here, and the comb of a third. One race is stingless, but worthless. One race is *Apis indica*. The third race I do not believe is valuable, since it is a very small bee—smaller than *Apis indica*. *Apis dorsata* is a wonderful bee, whether it can be domesticated or not. It builds in the open air on branches, often making combs six feet long; and I have good authority for saying that *thirty natives have each taken a load of honey from one tree*. It was not until I reached Colombo that I could find out any thing about *Apis dorsata*. I call it *Apis dorsata*, but don't know positively as that is its name, for no one can tell here, and I have not yet seen the bee, as it was too late when I learned where to find it to go to that part of the island and reach this French steamer. Everybody says, though, a large bee from which great quantities of honey are got easily, is in the interior of the island. The natives all know it by the name *Bambera*. I start for Sangapore by French steamer *Yangste*, Jan. 31, 2 A. M. FRANK BENTON.

Pointe de Galle, Ceylon, Jan. 30, 1881.

Friend Jones adds the following in regard to the above two letters:

So you see, friend Root, that, although it requires a fortune to keep up the enormous expenditure connected with my importations, and breeding pure and superior races of bees, yet the bright prospects of lakes (instead of cisterns) of honey, and millions of dollars in the pockets of the bee-keepers of America cheer me on in the great work; and if there is a race of bees in the *world* that is superior to ours, or if they have any superior traits that can be embodied or used in crossing, I want them. Having mastered wintering, valuable races, that is, those that produce most honey (money) for bee-keepers, is what I am after. D. A. JONES.

Beeton, Canada.

As friend B. has assured us of the untruthfulness of the people of the Isle of Ceylon, perhaps we had better wait until he sees the great loads of honey himself before we invest greatly in *Apis dorsata*.

REPORT OF NEIGHBOR H.

OUR bees have wintered very well, though we have lost a few swarms. We have three apiaries; the one at home being Holy-Land bees, the queens of which were raised from imported stock received from D. A. Jones. We raised quite a number of queens from A. I. Root's Mount-Lebanon queen, and as we took great pains to secure drones from our Bethlehem queen, we think we have as pure Holy-Land bees as can be found.

Our apiary on Rocky River, six miles from home, has been kept as purely Cyprian as possible; and as all our combs are made from foundation, we can control the rearing of drones. We have over seventy pure Cyprian queens, raised from imported stock.

We are wintering over a dozen choice imported Italian queens for A. I. Root, and have a lot of tested Italians, so we are in a shape to please you all. The Cyprian and Holy-Land bees will be sold at the same price as Mr. Root sells his select Italians. I have, in all, 120 colonies. H. B. HARRINGTON.

Medina, O., March 19, 1881.

The "Growlery."

This department is to be kept for the benefit of those who are dissatisfied; and when anything is amiss, I hope you will "talk right out." As a rule, we will omit names and addresses, to avoid being too personal.

I LIKE your A B C very much, and from it and your magazine had formed a pretty high idea of the practicability of your advice; but my faith has suffered a pretty severe strain in this first winter of bee experience. Why do you recommend those wretched transferring clasps? Is it because a bit of tin may be sold while a strip of wood can not? I have used them on two colonies, and, though I stick them around almost wherever a clasp could go, they have all tumbled out and leaned up against each other and the sides of the hive, so that the combs are just one chaotic mass, and I am about as bad off as before transferring. Furthermore, the combs were thick, and so bulged and twisted that it was not possible to get more than seven in a hive, and then they touched here and there, and one was waxed up solid. My best transferring was done with stiff sticks, three on a side, and they work much better. GEO. D. SHAW.

Thomasville, Thomas Co., Ga., March 1, 1881.

I am glad to get criticisms; but, friend S., do you not think it was a little rough to accuse me of selling the clasps only because of the small profit I might make on them at 15 cts. per 100? Would it not have been a little kinder to have concluded the fault might have been a little because you were *new in the business?* You will see that I have, both in our price list and A B C, illustrated clasps, wires, and sticks for transferring. With heavy bulging combs, such as you say yours were, I too would use the wires or sticks; but with ordinary combs, nearly empty, I greatly prefer the clasps. You chose the clasps above, and now abuse your old friend because "troubles" came.

The "Smilery."

This department was suggested by one of the clerks, as an opposition to the Growlery. I think I shall venture to give names in full here.

ALTHOUGH I am very busy, I will stop long enough to give you a little "taffy;" not that I take you for a "busy bee," nor that I think you out of stores, nor even unwell (?). But, you see, I am contemplating keeping bees, and a little experience is necessary to success in any business. I shall probably be "taxed" more, financially and physically, feeding bees than on any other account.

This reminds me that I haven't said what I started out to say.

The cheerful, happy way you have of treating every thing and everybody, and the little embellishments of wit and humor are in such great contrast with the long faces, sepulchral groans, and freezing coldness of many professed Christians, that on first acquaintance one is inclined to incredulity. It is a great pleasure, and a rarity, to find a man who is willing to do more than he believes is his duty. I am persuaded the number of professed Christians is large, who believe that levity in any form is a sin.

There is another matter I wish to mention; in fact, it is what I have been trying to come at; but I thought it best to give you the "taffy," as you did Mrs. C. before commenting on her book.

I enjoy a good "yarn" or joke as well as the next man. Why, sir, it makes me feel good for half a day to take a good hearty laugh. Of course, I believe in them; and, friend R., if you disagree with me, I must beg of you not to publish such "funny" things in GLEANINGS. "Old Zach Brown," for instance; trying to hive the handsome widow's bees, and the part "Crony" took in the affair! Fancy painting is my favorite, and while reading of the affair, as I rode over on the car, I could see the participants as distinctly, from that vivid pen-picture, as if it had been on canvas. I never was so "wrenched" in all my life; burst, I wanted to; but the surroundings were unfavorable. I realized the impropriety of such a thing in a car full of passengers.

Cleveland, O., March 10, 1881. D. C. SHULL.

If a faith in God should not make one cheerful, friend S., I do not know what should; but we should be very careful that our enjoyment or pleasantry is never the means of giving some one else sorrow. Many thanks for your very kind words and good opinion.

BASKET WILLOWS—"T'OTHER SIDE."

EDITOR GLEANINGS: You ask, on page 91, "Who will tell us something about willows?" Well, sir, we will, all we know; and no one ever lived in Michigan without knowing something. There are at least fifty acres within two miles of our apiary. They yield almost incredible quantities of pollen just at the time when new pollen is most needed; also secrete a vast amount of the worst smelling, worst tasting honey that your humble servant was ever so unfortunate as to taste, and yet the bees like it, and it does them good. In fact, the impetus that willow pollen and willow honey gives to brood-rearing just at the right time has done more to enable us to make a good report the past two poor seasons than any thing else. Good for baskets? Yes, first rate; makes best kind; best thing out for tying up bundles of nursery stock, or for making withes for any purpose. We use them largely for tying up corn stalks into bundles, etc. But for all their good qualities, willows are considered a nuisance, and farmers, laborers, bee-keepers, and everybody unite in waging a war of extermination against them; but they seem to hold their own pretty well yet. They are ten times harder to get rid of than Canada thistles. Cut off a sprout, and ten will spring up in its place; and as for grubbing them out, we give it up in disgust. If any enthusiast wants to plant a few acres, all he will have to do is to stick a row of cuttings through the center, and some fine morning he will wake up and find he has that worst of all pests, a "willow swamp."

Now, if any one wants a car load of cuttings, come to Plainfield; we haven't got much, but we've got *willows*, that's a fact. We'll give you all of them you want; and if that is not enough, we'll furnish a man to help you, and foot your board-bill. You need a piece of wet ground to grow willows to perfection. If you haven't got it, come to Michigan—lots of it here. F. L. WRIGHT.

Plainfield, Mich., March, 1881.

SHALL WE GIVE UP BEE-KEEPING?

OUR neighbor Shane has wintered all his bees as usual, losing only about three or four colonies out of something like 160. Neighbor Rice has lost two colonies out of 102. His were wintered in the cellar, while neighbor Shane's were wintered out of doors. Friend Rice's wife raised some queens for us last season, and I asked him how his wife succeeded in wintering the hives she raised the queens from. If I am correct, he said she doubled them up into four strong colonies; but out of this four, she had lost three in wintering. He says he is satisfied that an apiary can not winter well that is used for queen-rearing, no matter how well they are doubled and fixed up. Neighbor H., whose report will be found on another page, although he raised queens largely,—in fact, did nothing else,—has lost only about 25 out of 145, leaving 120, as he gives it. Quite a number of these (in consequence of the young Holy-Land queens rearing so much more brood than Italians), were lost by starvation. This does not look as if queen-rearing was so very bad, after all; but his queen-rearing nuclei were kept so strong as to be almost full hives during the whole season.

The encouraging part of it is, that our old veterans are succeeding, year after year, almost without exception, and every year we see additions to the number who say joyfully, "I, too, have succeeded." The doleful reports of losses, if not all from the A B C class, are a large part of them from new beginners, or an unfortunate class who seem to be so careless that they fail, or partially fail, in almost all kinds of business they undertake. This may seem a little rough, but is it not true, and will it not be helpful to us if we face the music? I am one of the unfortunate ones, for I have lost now about a third of my apiary, but it was because we reared queens so much, and also because we failed in selling about 50 queens in November, that we should have sold if the winter had not come on so suddenly. Now, a little helpful advice: If you fail in wintering, go and see some one near you who does not, and do just as he does. I think it will do me good to go and see neighbors Rice and Shane about next November. One winters in the cellar, and the other out-doors; but both of them always succeed. I know how already; but still such is the force of example that I think it will do me good to go and see them. Will not a similar visit do you good too, my friend? It has been said, and perhaps truthfully, that the old hands do not report their losses. Well, let us make them report, as we have Doolittle. I want to hear from all those who have large crops of honey to sell, year after year. Of late, when I get a letter telling of great losses, I have got into a way of thinking, "Well, now, this is one of our new hands," and on turning to the signature, sure enough so it turns out almost every time. Another thing: An old, well-established colony that gives a yield of honey year after year is almost sure to winter; the old tough combs and the well waxed-up hive may have something to do with it, but I am sure a great abundance of stores, so that whether the bees get over to the north side or the south side, they are sure to find sealed stores all about them, have much to do with making it a sure thing. Do you not think so? Well, we want the owner just like such a colony. His work should be of such a kind that one would say, in looking at it, "Why, of course it will come out all right; anybody might see that at a glance." I used to think our friend L. C. Root extravagant when he said it needs 30 lbs. to the hive; but I begin to think, of late, he was just about right. What do you think?

LEAVING THE SECTIONS ON ALL WINTER.

ANOTHER NEW IDEA IN WINTERING.

OUR conscience has been troubled considerably of late because we had been unable, by the unfavorable weather, to put ourselves in full sympathy with our 22 hives of bees at our home in the city. Yesterday we examined all, and gave them full frames of sealed stores and trays of candy where needed. Our report is, 19 alive (one of them very weak, 18 in good order), 3 dead. One of the dead ones was in chaff hive, but we had decided last autumn that they had no queen; still, in the pressure of other business, it was neglected. This hive has 10 full frames of capped honey, and some sections in it now. Five of our chaff hives never had the second crop of sections taken off, the cold in November coming one day too soon to finish, and 4 of these are strong and in splendid order. We have as heretofore fed up for late brood-raising with syrup of 10 lbs. grape, 5 lbs. coffee A, and 3 quarts of water, fed nights in Simplicity feeders. We still attribute our good success in wintering out of doors to the late brood-raising, which gives us bees that live until March. The 4 chaff hives with the 10 wide frames of sections still on, and no further protection (not even a cover of any kind between the brood-frames and broad frames), are in just as good condition as those in chaffs, well covered with cushions. They were, we think, a little more quiet during the slight thaws in February, which of course was a great advantage, as there were serious losses in numbers on those days.

We have chaff, Simplicity, and old L. hives. All were alike good, but we feel much more comfortable about the pets in chaff hives well covered, when the mercury falls below zero. A. C. KENDEL.

Cleveland, O., March 11, 1881.

Now, friend K., this reminds me of some thing I have never told anybody. Yes, my friends, it is a positive fact, there is one "whole idea" in my head that I believe I have kept pretty much all to myself. One spring, in looking over our bees we found one colony that, by some strange accident, had a case of sections over them, precisely as it was in the fall. "Why, that is awful," thought I; and as the winter had been cold, I expected to find them all frozen stiff. Not a bit of it; they were clustered clear up into the sections, some of them, and a brighter, nicer colony I never saw. Of course, I took off the sections, made the bees get out of them, and after stirring them up a great deal, got them under a chaff cushion, and felt better. After this there was a severe zero freeze, and, to my astonishment, this colony, for some reason or other, dwindled down and died. Well, now, it could not be protection was not needed, because I tried wintering a strong colony with nothing but a cover over them, as some of you may recollect; and, although they held out pretty well, it killed them before spring. Well, one spring I was down at neighbor Dean's, and he startled me with the abrupt intelligence, that a colony with the honey-boxes all on, and nothing else over them, would winter better than any other way you could fix them. I very kindly reproved (?) him, and told him how unreasonable such a theory was; but he held on pretty hard, for a neighbor of his left a colony just that way, and it came out better than any of his protected ones, even those wintered in his nice wintering-house. Now, it has occurred to me that, with the sections waxed up between the passages as they usually are, there is a very much better covering than none at all, as in my experiment; and is it not possible that the rest of the boxes hinder, to some extent, a circulation of air (*very coarse* chaff or shavings), and yet secure the idea of perfect dryness which we need? Now, has anybody else ever been guilty of leaving the sections on all winter, and, in fact, clear into the next season, ready for the new crop of honey? If there is such an individual in the company, let him stand up! but wouldn't that be an easy way of fixing the bees for winter and summer too? I do not think, however, I will put it in the A B C book until another season.

UNDER THE BOX-ELDERS.

IN passing the pleasant residence of our chatty friend Mr. Duster, a few days after our last talk, we saw him seated under his favorite shade trees. He signaled us to join him. He had evidently been reading, as one or two bee journals lay near him, and he at once broke out by saying, "I see several of the bee journals advise

REQUEENING

late in the season, and so on. This is all well enough, but I would never give such advice without also giving proper caution at the same time.

"Now, for instance, take such a year as last season. Bees made but little surplus honey, and in Sept. had just about enough stores to go through the winter. Those who requeened at that time found that the young queens, as a rule, had been a little ambitious to show what they could do, and so had gone to breeding; and when the careful owner was about to place them in winter-quarters he was greatly surprised to find his stocks so light; and the careless owner found them in the spring, dead,—starved.

"My experience has been about this: If the hives are heavy with honey in the fall, there is but little to do but to introduce the queen, and all is right. But if the hives are light, or can just pass inspection for wintering, and you give such, a young queen, she is almost sure to go to breeding and raising more bees than the one in the full hive, for she finds more room to do so. I think that, nine times out of ten, the light hive will need to be fed to prepare them for winter, if a young queen is introduced late in the season. But if proper care is used, requeening late in the season is all right, I think. The increase of young bees is in its favor, and likewise readiness for early spring work."

I asked Mr. Duster if he was ever troubled with

TOO MUCH HONEY

in any of his hives when he was about to place them in winter-quarters."

"Troubled! what do you mean?"

"Well," said I, "some writers find too much, and recommend extracting to give the bees more room, etc."

"As a general thing, I don't like trouble," said Mr. Duster, in his quaint way; "but, I think I would like a *little* of that kind, and I would go a good way to see a hive that had not enough of empty comb by the 20th of Nov. for bees to winter in safely. I think on this matter just about as Mr. Lo! the poor Indian thought of whisky—'Too much of a thing—no good. Too much whisky—just enough!' No: I must say I was never troubled or distressed, nor my bees either, in this way.

"You can hardly take up a bee journal but you find something in it in regard to

SPRING DWINDLING."

Said Mr. Duster, "I have had but little of it, and like all the rest I have my opinion. You know how I prepare my bees for wintering in my cellar; viz., by placing mats made of unbroken rye straw at the sides and on top of the frames, and also filling the upper story with dry leaves, or some other fine dry substance; leave them in the cellar without any fly until about the 10th of March in this region; put them out-doors in the evening; do not remove or disturb any thing until I put on boxes unless I have to feed.

"Why, I was reading just now, as you came here, of a man who objected to wintering in cellars, because bees dwindled so badly on being taken out, and—and—etc.; therefore he preferred out-door wintering. Now, whether he thought it made them *tender* by being kept in a warm cellar, or that it made them *tougher* by being exposed to the cold of winter, I can not say: he evidently meant one or the other.

"It reminds me of an old gentleman, my nearest neighbor, when I lived in old Massachusetts. I was raising colts; and when storms and cold November came, I put them in a warm barn; gave them oats, and the best of care. This neighbor of mine had only one colt, and he thought very highly of it—was raising it for his own especial use. He never gave it shelter from the cold storm or the biting frost. I was curious to know his reasons. He said, in answer to my inquiry, that he was 'toughening it.' I thought at first I had given myself away, and that he was slily feeding me a little 'taffy' in a mild way, as he was fond of a joke. But on taking a look at him I saw he was in dead earnest; so I suggested to him, as this was a new idea to me, that he try it on himself; and as the colt couldn't talk, and *he* could, that he should report as far as he got, and how he liked it, and so on. The old gentleman thought a moment, drew out his snuff-box, tapped it affectionately two or three times, took a vigorous pinch of snuff, blew his nose with a fearful blast, turned, and went toward his house muttering something about 'boys couldn't teach him how to catch suckers,' and he was gone, and the result of my suggestion lost to the world!

"Now," said Mr. Duster, "it seems to me that bees managed in this way, viz., with no protection but an ordinary hive, after going through several months of confinement in a cellar, and suddenly put out of doors, is just the surest way to bring on this trouble of spring dwindling. If there is one time more than another when bees want protection and care, it is the two first months of spring, in my opinion.

"I do not put my mats at the sides and tops of my frames, and fix up my hives warm because I am going to put them in the cellar to winter—not at all; but it is because I want them fully protected against the sudden changes of the weather when I put them out in the spring, and *please don't forget it.*

"Now, if you ever write for GLEANINGS," said Mr. Duster, "you just touch up A. I. Root for me upon this point; he'll stand a little punching, and rather like it too, I reckon, and especially if it is a good thing you punch him with, and I think *this* is; for I don't believe," said Mr. Duster, firmly, "that any one who has a good cellar, and prepares his hives, not for winter only or mainly, but for the chilly, cold, changeable weather of spring, will ever have much of this spring dwindling."

I here bade Mr. Duster good-by, evidently shortening up his talk, for he suggested that he had a story to tell, but said it would keep. R. H. MELLEN.

Amboy-on-Inlet, Ill., March 12, 1881.

Friend M., you tell Mr. Duster next time you see him, that I agree with him exactly in regard to too much stores being just enough, and also in regard to blanketing the bees clear into May or June. Ours are packed up now just as they were in the winter, and so they will stay until—well, I really am not sure but they will stay until June, some of them.

GOOD-BY, CELLARS.

BY OUR A B C CHILD.

HAVING experimented three winters with different modes of cellar wintering, I abandoned it altogether the present winter, for the reason that I found that one-half of all colonies would die outright with dysentery before spring, and those which stood it through would dwindle down and never amount to any thing during the season, while those wintered out would be hardy, and breed up early; the combs and hives of those dying in cellar were hardly fit to use again; and of those that lived, the bottom would be covered with an inch or more of dead bees, mold, and filth, which necessitated their being given clean hives. If a person must winter in cellar, let them take away all combs containing pollen, giving pure dry sealed honey instead, and put in none but pure Italians, as blacks are almost sure to die with dysentery. I believe darkness has something to do with it. But why go to the trouble of putting bees in cellars when they are so much better off outside? I gave my plan of out-door packing and preparation for winter at the bee-keepers' convention at LaCrosse, Wis., Sept. 14, 1880, which was copied by the *A. B. J.*, Dec. No., p. 572; also copied by A. J. King in Jan. No., and I also saw it in the *Western Rural*, of Chicago; so I will not repeat it here. But I will now report the effect. First, let me say the winter has been the most severe ever known here. I live perhaps as far to the northwest, or further, than any bee-keeper writing for the papers. Remember, my article was written Sept. 6, 1880, before surplus crates and upper stories were taken off, and I said in the article, "Remove 3 or 4 frames of honey from the brood-chamber (choosing the lightest.)" Now, the fact was, when I came to pack them the swarms were so heavy I could not remove *any* frames. I had 5 Modest hives, 11 frames each; 19 L. hives, 12 8-frame and 7 10-frame. I left all frames in. I used a shade-board before each hive. It froze up Oct. 26th for good. Nov. 13th, three inches of snow fell, and we have had snow, more and more, ever since. To-day makes 123 days that sleighing has been good, and now the snow is 3½ feet deep on a level, and in many places 25 feet in drifts. Trains have been suspended many times, several days at a time, during Nov., Dec., and Jan. The cold was intense, three times dropping to 40° below zero. I have kept a diary of the weather, and can furnish it if desired. It has thawed in the sun only 11 days this winter so far, and only 7 days in the shade; but bees have managed to fly on four different occasions, and I have examined them to-day. I find 20 filling the hive with hatching bees in 4 combs, and cluster coming down to bottom-board; 3 I found no brood in, and crowded them on 4 frames, and one I crowded on 2 frames. Inside of all hives are dry and clean, with plenty of clean sealed honey. They seem to be carrying in water very fast on warm days. I have kept them shoveled out all the time. The snow is banked up all around them 6 feet high. This I cover in front of hives with straw litter. Thus I have lost none, and consider them safe now; 20 of them are as good as they are generally on May 15th.

ITALIANS AHEAD.

My bees are all full-blood Italians, and I think them more hardy than blacks. On raising the cloth in winter they lie as still and quiet, and look like so much grain filled in between the frames. I think this quietness saves them. My experience is not confined to my bees alone. I have been appointed specialist for 3 years in this township, and therefore have superintended putting away many times more bees than my own, and in no case have I found dysentery with Italians packed on this plan, and no loss, while all the blacks have died with it, or nearly all. Bees packed after cold weather set in have suffered as much as those unpacked. One writer says those hives which are breeding in February he counts worthless. These I count the best. Show me one with no young bees hatched in February, and I will show you a swarm that needs the division-board, and to be given a frame of brood at once.

Arcadia, Wis., Mar. 16, 1881. E. A. MORGAN.

GALLUP ONCE MORE.

HIS IDEAS IN REGARD TO HYBRIDS.

WELL, Novice, and my numerous bee-keeping friends, here I am back again among the bees, taking a mental rest; and I can assure you it is a rest in real earnest, after spending a few months in caring for the sick and afflicted.

Now about the bees. I never yet saw them in better condition at any season of the year than they are at this present time. The poorest stock I have is in as good condition as the best was at this time last season. I had last fall, when I left, 112 stocks; now have 108; lost 4, probably from queenlessness. I commenced the first of this month to raise queens, and divide. In reply to George Grimm, in Nov. No., I will say that I certainly have found strains of hybrids that were as profitable as any pure Italians that I ever owned, and I have always kept them for profit. This accounts for my never advertising queens for sale. But if a friend wanted a queen from me he invariably received a good one, and one that came up to my standard for excellence. Mr. Grimm and Dr. Hamlin were the only parties that I ever received queens from that proved satisfactory in all respects. My experience has certainly verified the fact, that certain strains of hybrids are as good in all respects as the purest Italian, for honey-gathering. My practice has always been to keep weeding out all unproductive queens or stocks that did not come up to my standard. I aim to get them fairly well marked; care nothing about their combativeness if the queen will only produce the eggs and the workers produce the honey. I introduce new blood by having one good queen of standard purity (never mind the extra light color.) By the way, I opened a hive on the 3d inst. where my imported queen died last year, and I found 8 Standard L. frames filled with brood in the main hive (a ten-frame hive), and 5 filled in the super. The bees are quite dark colored; a great many people would not be satisfied with them. But they are just the kind that suit me. I find that all my queens raised from the dark leather-colored one are booming stocks now, and ready to divide. I commenced to take off my supers, but found the bees storing new honey in them, and so strong in numbers that it was not necessary to confine them below in order to economize heat, and the weather is extra warm. Last season, with one light stock and cool weather, it was necessary, as it made about three weeks' difference, on an average, in swarming. Quite an item. We will need more rain in order to secure a large yield of honey; but there is plenty of time for rain yet, and a great deal depends upon whether we have much of those terrible dry and hot Arizona-Desert winds. I am making hives, and getting ready for the season, come or not. Will try to let the readers of GLEANINGS hear from me each month for the next 5 months, if nothing prevents. ELISHA GALLUP.

Santa Paula, Cal., March 7, 1881.

EXTRACTED HONEY, HARVESTING, HANDLING, MARKETING,

Is the title of a little pamphlet by our friends Dadant, and is certainly a valuable contribution to our bee literature. One of the principal points of the little treatise is one I have many times urged; viz., adding story after story to the hives as fast as the bees fill frames, until the whole product of the season stands tiered up, right where it was gathered. I have had four stories filled thus, with almost solid frames of capped honey, and with us the honey, when left thus on the hives, is always of superior quality. When all hurry of the surplus season is over, take these filled combs into a room protected perfectly with wire cloth, and extract at your leisure. Put the combs back into the hives for the bees to clean off, just after sundown, and you will have no trouble from robbers. Our friends will remember that I have advised, in the A B C, taking away such filled combs by moonlight, to evade all "onpleasantness." The little book is mailed to any address for 15c. It contains 24 pages of reading matter, and 8 pages of advertisements. We can mail it from this office if desired.

DOUBLING OR UNITING COLONIES OF BEES BOTH IN SPRING AND FALL.

HOW DOOLITTLE DOES IT.

SINCE we promised, last December, to give our plan of doubling colonies of bees, we have had many letters desiring us so to do, and we should have done so before this had not sickness prevented. We are often told, that if bees are very weak in March and April they should be united at once, putting two, three, or more together so they might, united, from a fair colony. We formerly adopted this plan till we ascertained from many experiments that colonies thus formed would be no better at the end of two or three weeks than each one would have been had they been left separate. If we have colonies that will not go through till June separate, we have found they would not united. We have put as high as seven remnants of swarms together in April, the seven making a good large colony at the time, and in a month all were dead. Hence we have come to the conclusion that we could not unite our bees with profit early in the season, so have adopted the following, which has proved successful so far. About the middle of April, according to the season (earlier if an early season, and later if a late one), some cool morning we look over all our bees by removing the cap and raising the quilt a little, and all that do not occupy six spaces between the combs are marked, and the first warm day are shut on to as many combs as they have brood in, by means of a division-board. If they are very small, so as to have brood in only two or three combs, and small patches at that, we take away all extra combs, so as to take precaution against robbing; but if stronger, we leave the extra combs the other side of the division-board, so the bees can carry the honey over as they need it for brood-rearing. Contract the entrance to suit the size of the colony, leaving not more than an inch in length of entrance for the best of them, and only space enough for a bee to pass at a time for the poorest. Our next work is to increase the brood as fast as possible in these small colonies. Keep them shut on the combs first given them till they are filled with brood clear to the bottom, when they are to have an empty comb placed in the center, which also will be filled in a week or so. Go over them once a week in this way till you have 5 frames full of brood in the strongest. The next time over, take a frame of brood just hatching from those having the 5 filled, and give it to the next strongest, say one that has 4 frames, and put an empty comb in the place it came from, and so keep working till you have each hive contain 5 frames, and those frames completely crowded with brood, which should occur about the 10th or 12th of June in this locality. Now, go to No. 1 and open it, and look the frames over till you find the queen, and when you have found her, set the frame she is on to one side; then take the 4 remaining frames and all the bees to No. 2. Spread the 5 frames in No. 2 apart, so as to set the 4 frames brought from No. 1 in each alternate space made by spreading the frames in No. 2. Now close up No. 2, and you will see that in 12 or 15 days it will be one of the strongest colonies you have in the yard. By alternating the frames, the bees are so mixed up that they will not quarrel, and I have never known a queen to be harmed. If we wish no increase of stocks we should begin early, and serve our whole apiary the same way. You will see we use 9 frames to the hive, but the plan is the same with any number of frames. We will now return to No. 1, which we left with the frame and queen standing outside the hive. Place it in the hive close to one side, and put in an empty frame; adjust the division-board, and you have as nice a nucleus as any person need desire. Of course, many of the old bees taken to No. 2 return and make the nucleus very strong. You can use this nucleus for any purpose you may wish. We will tell you some of the purposes we put them to: 1. We use them to supply us with queens; 2. We keep them building combs till they are all used up, taking it away from them as fast as built. Now, we verily believe we can produce nice straight worker combs in this way cheaper than we can buy foundation and pay express on it; and you know Doolittle is great on saving the cash outlay, as far as possible, in all things connected with the apiary; 3. If we wish more colonies we can build them up to strong colonies by fall, or these little colonies will produce as much extracted honey according to their numbers as any in the yard.

UNITING IN THE FALL.

If we wish to unite our bees in the fall, from scarcity of honey, weakness as regards bees, or from whatever cause, the first thing we want to know is, which of the two stocks to be united has the better queen. Having ascertained this, hunt up the poorest and kill her. Now select from the two the number of frames having the most honey in them, to the number you wish to winter them on, and set them in one of the hives, alternating them as far as possible. Shake the bees which are on the remaining frames off at the entrance, taking one frame from one swarm, and the next from the other, so as to mix the bees completely. See that all go inside the hive, and the work is done. We never knew bees thus mixed to quarrel at any season of the year. Remove all of the hive and combs from the stand occupied by the united stocks, and so far, I am satisfied, what few bees return to the old place go to the united stock after finding their old hive is gone. The mixing-up process tends to cause them to mark their location at the next flight. Thus we have told you how we do with our bees as far as doubling and uniting is concerned. G. M. DOOLITTLE.

Borodino, N. Y., March 12, 1881.

Tip-top advice, friend D. My experience of late has been so much like yours, that I have told the boys that, if they could not make a colony pull through in ways such as you have mentioned, they had better let it go, saving the queen if possible, than to try to fix it by uniting with other stocks, or taking brood from stronger colonies. It is true, a stock is often saved by taking a frame of brood from another; but the one the frame is taken from suffers a loss of young bees at just the time it should have had them; and oftentimes, before the spring is over, both have died, where the best one would have been all right had it not been for this untimely and injudicious "tinkering," by taking away the very life and strength of the stock, in the shape of a frame of brood. Again, this frame of brood is often in such shape that the weak colony can not care for it all, and it dies, a greater part of it, by being chilled. I would try to build all up without uniting, for our bees do quarrel now and then, even when united in the manner given.

FROM THE "STAR APIARY."

BEE CULTURE VERSUS KEEPING A SALOON.

I WAS engaged in the business of saloon-keeping from the year 1867 to '77. One nice spring morning in May, '77, I went fishing, for a little out-door recreation, just at the time the willows were in bloom. On them I saw many bees at work, and finally I became more interested in watching the bees at work than I was in my fishing. I noticed they all took an eastern course, and flew low. I took it into my head that they went in some tree not far off, and so I traced them to a sycamore stub not far off, and found them working very strong, and that they were a bright yellow bee (what I then called a tame bee.) I went home rejoicing over my good luck. Assisted by two men, that evening I cut a gum off containing the bees and comb. We took it across the river in a skiff, and carried it to my place of residence. The first of June I got Mr. Fansher, a miller in town, and an old bee man, to assist me in transferring them to an L. hive. They proved to be pure Italians, and about ready to swarm. I divided twice that season, making three in all, but took no surplus honey.

That summer I put all my means in a new building for my saloon, billiard hall, and residence. On the night of the 27th of Sept., '77, our building was discovered to be on fire, and we were alarmed just in time to escape from being consumed in the flames. My boy of ten, and two younger girls, were already nearly surrounded by the flames in a back bedroom, but we escaped through a front window by means of a ladder. Owing to the darkness, smoke, fire, etc., we saved scarcely a suit of clothes apiece; but, thanks to the good people of Colfax, they provided for us some clothing and bedding. I had no insurance, so it was a total loss of over $2000.

I was advised to build again, and the lumbermen said they would give me all the credit I wanted for lumber, by getting it insured in their favor. So I built and opened up again in Nov., '77. My trade prospered until the night of the 2d of April, when my building was burned to the ground again. But little of the contents were saved. It was the most severe stroke on me that I ever received. My strength all departed from within me, and I was taken away from the scene of the fire in an almost unconscious state. I then said I would never engage in the saloon or liquor traffic again. My loss was nearly $3000, and some in debt. I was left without any thing, and a small family to support, which I did by day's labor the best I could. But the three stands of bees were safe up at the place where I lived the fore part of the season. I wintered them in a cellar, and in the spring of 1878 I bought 9 more and lost one by robbing, and increased the 11 to 32, and had about 200 lbs. of extracted honey; sold it to neighbors for 15 cts. per lb.

I worked up some sign-boards that were lettered "Billiards, Beer, and Wine;" the letters show on the hives yet, although I gave them a coat of paint. I wintered the 32 in my cellar, without the loss of one, and but one queenless in the spring of 1879. From the 32 I increased to 72 that season, and sold 600 lbs. of extracted honey at 10 cts. per lb., and 300 lbs. at 15 cts. I put bees in the cellar Nov. 1st, and took them out March 24th, 1880; lost two; bought 7, and increased to 96, and had 3100 lbs. of extracted honey and 800 lbs. comb honey. The extracted was all sold by the last of Oct., except what we reserved for home use. We use considerable for putting up fruits, and making jells. We sold the comb honey at 15 cts.; have about 100 lbs. yet for sale. I have my bees this winter in a cave, or side-hill house, with ventilation arrangements, etc.; have them on racks, or shelves, in three tiers. The temperature has averaged in it 40°. I keep it dark, and visit it often; have lost 3 stands up to date, which leaves me 103 yet. I bought 10 late in the fall.

I use the L. hive. I bought a piece of timber land one mile from railroad station, and near the mineral springs. Thousands of people visit these springs for health, and they effect some wonderful cures; large hotels, and good accommodations. I am fitting up my land for a honey-farm, and expect to make apiculture my business in the future. I will say this to the brethren in apiculture: Throw off the blinding influences of prejudice, and throw open wide the gates of benevolence and enterprise, and permit the streaming light of apicultural science to take full possession of your intellectual department.

I know I could have done much better in my 3 years' work in apiculture had I not had to work against disadvantages; I have experimented a great deal with comb fdn., and am highly pleased with the advantages derived from it. GEO. W. PENN.

Colfax, Iowa, Feb. 16, 1881.

May the Lord be praised, friend P., that you have exchanged the damaging saloon business for the peaceful one of bees. In selling honey, you never send a fellow-being on in his way to ruin; but in the other, even put it in the best possible light, it has at least the appearance of evil. Go one step more, if you have not already, and choose God for your guide and helper, and your ways shall be pleasantness, and all your paths peace.

EARLY FEEDING TO GET GREAT AMOUNTS OF HONEY.

WILL IT WORK?

I NOTICE one point in your comments on Mrs. Lizzie E. Cotton's book that drew my attention to a point that I have been thinking of writing to you about for some time, and that is in regard to building up stocks to their fullest strength by the time white clover opens. It has been advocated in GLEANINGS before, and I have been trying to practice it, but it has not been satisfactory to me. I do not care about increasing my bees above 30 stocks. My aim has been, the last two years, for honey. In the spring of 1879 I built up my colonies early, and had them strong before clover opened. There were three colonies that I had in chaff hives, and I had built large air-castles about the amount of honey I would take from these three hives. Having them in large hives, I gave them plenty of room so they should not get the swarming fever as I call it; but about the time white clover commenced to yield, No. 1 commenced to swarm, but I thought *I* was running the apiary, and would run it for honey. So I clipped the queen's wings and put them back and destroyed queen-cells and gave more room, expecting they would go to work; but they did not feel disposed to do so, but came out the next day again to swarm. I was on hand and caged the queen and waited till they came back; then I let the queen enter with them, thinking I had played a trick on them.

But the next day they were on hand again; so was I, and I put them back again, and destroyed the queen-cell again. Not being satisfied with one trial a day, they came out twice a day, and I would put them back twice a day. Thus they proceeded, and I was determined to conquer, until they came out the twelfth time, when they united with a second swarm, and I concluded to hive them together and be done with them. So the honey season passed around, and I did not get much honey. Swarm, swarm, was all the go; the rest of my colonies were nearly as bad, and so in the spring of 1880 I built them up again in the same way, but took more pains to give them room to keep down the swarming fever, but they commenced to swarm as they did the season previous, and I put some back till I was tired; and, not having prepared as many hives as I should have done, I commenced to run short, and it was getting late in the season for swarming. I would hive two and three that had come out and clustered together in one hive, and as I was busy at haying and harvesting, while I would be out of sight they came out and left for parts unknown. In all, there were six colonies served me thus.

Now, I do not wish to increase, as I have as many as I can attend conveniently with my other work, but would like to run them for honey, and know that a strong stock is worth two or more weak ones. How shall I manage that swarming fever, and get them to store honey? AARON J. WEIDNER.

Bigler, Pa., Feb. 21, 1881.

I know this is often the case, friend W.; but I would build them up, for all that. If they swarm, put them in a new hive, and get them to work in the sections as soon as possible, and then, if you choose, make them strong again with brood from the old hive. A new swarm well started in the boxes will seldom swarm again. If extracted honey should be the thing again, as I half think it will, you can easily hold them by taking all their honey away. No, sir, 'ee, friend W., we are not to be scared out of building them up strong, on account of the swarming fever. We can fix them in *our* apiary, by selling off those by the pound that have the swarming fever. Don't you see?

ONIONS AS A HONEY-PLANT.

A NEW INDUSTRY FOR OUR BEE FRIENDS.

IN March No. of GLEANINGS, page 117, I notice a communication from Mr. G. A. Willis, headed "Onions as a Honey-Plant," in which he says he knows that this does not belong to bee culture. Although he may not know it, and perhaps many others, the flowers from onions cultivated for the production of seed form a great honey-producing plant; and I claim that any honey-producing plant belongs to and is identified with the interests of bee culture. Although I may not agree with friend H. in his reply, that they make a beautiful flower-bed, yet there is no accounting for taste in the floral world, as in all things else. Having been many years an onion-grower and a producer of the seed of this pungent edible by the twenty-five to fifty acres each year, and a bee-keeper at the same time, I have had ample opportunities to observe its honey-producing qualities; and from thorough and careful observation have become satisfied that an acre of seed onions is of more value to the bee-keeper than an acre of buckwheat and a larger area in a corresponding ratio, and the honey is of a superior quality. The onion blooms at a season of the year when other honey-producing flowers are comparatively scarce. When in bloom, on all pleasant days it is almost like walking through one continued swarm of bees to pass through a field of seed onions; and, like the Spider plant, drops of pure nectar glisten in the rays of the morning sun, and all Miss Bee has to do is to walk from receptacle to receptacle and sip the priceless treasure, there being from 100 to 300 of those receptacles upon each ball or flower; and I consider any bee-keeper fortunate who has fields of seed onions in proximity to his apiary. There are annually from 50 to 100 acres cultivated within easy reach of my bees, and if it is weather that bees can gather honey during the bloom, I mark it down that my bees are safe for stores. One would naturally suppose that the pungent odor and taste of the bulb and young plant might impart its flavor to the honey; but I have never yet been able to detect any ill effects from this cause.

I apprehend that friend Willis does not contemplate going into onion culture for the production of seed, from the way he talks, but proposes to grow the bulbs for market or consumption, and inquires for the best varieties. Now, this very much depends upon the purposes for which he proposes to grow this vegetable, whether to market in the green state, tied in bunches, to be consumed by the purchaser in that form, or retailed by the grocer to supply the tables of his customers from day to day, or bring the bulbs to maturity, and market in a dry state by the barrel or bushel, or whether he grows them for the production of seed. Were I going into onion culture, I should choose a different variety for each of the different propositions; namely, for marketing in a green condition, as above, I should by all means plant the English multipliers; if for marketing in a dry state, Yellow Danvers; if for seed, Yellow Dutch and Weathersfield Red, for the following reasons; namely, if for market in a green state, the multipliers come to maturity very early, sufficient to be sold in a green state, and at a time when other green vegetables are scarce in the markets, and consequently find a ready sale, and at remunerative prices, if your land is clear for a crop of buckwheat, or some other honey-producing crop or late garden vegetables in the way of late cabbage, cauliflowers, turnips, etc. I frequently raise a fine crop of late tomatoes on my multiplier ground, setting the plants in every third space between the rows about the 18th of June, and, as the onions are cleared off for market, cultivate and hoe in the ordinary method; if for marketing the bulbs in a dry state at maturity, Yellow Danvers, on account of its producing qualities and higher prices in the markets—generally reaching from 10 to 15c higher per bushel than the other varieties. Average yield on good land, properly cultivated, from 400 to 500 bushels per acre; if for seed, Yellow Dutch and Weathersfield Red; for their productiveness in the growth and proper maturity of seed, the Yellow Danvers—a strong producer of seed.

I have kept bees for over 20 years, mostly in the old Quinby box hive, but have abandoned it—not particularly from the result of my own experience and observation, but from the result of the experience and investigation of others, connected with my own thought and practice, and have adopted the movable-comb hives, simply the plain Langstroth without portico or projection on top of cap, with movable bottom-board, and so constructed that I can set an extra hive filled with frames of 1-lb. sections directly over the brood hive, and with honey-board so constructed that I can place upon this top hive 10 frames of 3 each 1-lb. sections, and put on the cap, making virtually a one, two, or three story hive at pleasure, without any extra pieces, and have named it "Dodge's Common-Sense Hive." I have a couple of dozen nuclei hives, constructed to hold each one, two, and three full-sized frames that I use in my hives for full colonies, with an observatory hive of each size, with glass sides and manipulating panels, which give me an opportunity to see the inside working at any time, by removing the panels; and with division boards can increase my nuclei to an indefinite number in my new hives for swarms. I set my hives 2 in. from the ground, with alighting-board reaching from bottom to the ground in an inclined position, in such a way that the bees can walk from the ground directly into the hive. My apiary is protected on the north and west by large and thick orchards; am in a good white-clover district, with a limited supply of basswood within reach of my bees, and onions stated, with quite a large area of goldenrod; have A B C, Cook's *Manual*, and Quinby's *New Bee-Keeping;* take the *American Bee Journal* and GLEANINGS, and eagerly read their contents as each number makes its weekly and monthly visits to my fireside. I do not expect to eclipse Capt. Hetherington or friend Doolittle, but am in hopes to make a fair average with bee-keepers in general; will report at the proper season.

Now, Mr. Editor, appreciating the benefits of others' experience, what I wish to know is, whether I have made any show toward a start in the right direction in improved apiculture. If you or any other bee-keeper will point out my mistakes, and set me right, through the columns of GLEANINGS, you will confer a great favor upon me as a brother in the bee-keeping fraternity. N. E. DODGE.

Fredonia, Chautauqua Co., N. Y.

FRIEND HAGEN'S STORY.

HOW TO PREVENT AFTER-SWARMING.

I HAD a fine young Italian queen in a weak two-frame nucleus. She had been laying about a day when one of my black swarms sent out a first swarm. I hived it, went to the parent stock, cut out all of the queen-cells, took my young laying queen with one frame, and put her in the center of the parent hive, and it produced twice the honey that any of the rest did.

UNITING FOR WINTER, AND ITALIANIZING, ALL AT ONCE.

I had 12 swarms when winter came on — 6 each of Italians and blacks; doubled up to 7, doing away with all the black queens but one. They were in Simplicity hives. I looked up the queen, caged her, and set the hive above the one I wished to unite with, and the plan worked well. I lost one this winter that was packed in chaff. The rest are all in splendid condition. About two-thirds of the bees in this county are dead. I have never had a swarm of bees die in winter with honey above them. The one in the chaff hive had no bees added to it in the fall. It had about 25 lbs. of honey. It looks as though about half was left yet. The others consumed more than twice as much. Hurrah for the Chaff Hive! It is the hive that suits me.

HOW QUEENS STING EACH OTHER.

I put three queens in a cage last fall, and from observation there is but one place that queens can sting another, and that is right against the waist, on the underside of the body. Now, if we could deprive the queens of their stings by cutting them off, and putting two in a chaff hive, should the plan work, we might have big swarms of bees to fill that doctor's hive in Wisconsin.

HOW TO TELL THE AGE OF A QUEEN.

To tell the age of queens in a large apiary, take a small pencil-pointed brush. Now take 3 different colored paints that would be best adapted to the purpose; commence and mark all queens the first year with one color on the shield — between the wings a small dot; next year the next, and so on. You could tell the age of all your queens that you raised, whenever you saw one, and it would also help to settle some disputed facts, such as a queen being fertilized the second time, etc.

H. F. HAGEN.

De Soto, Jeff. Co., Mo., Feb. 28, 1881.

You are correct, I believe, friend H., in regard to the way a queen stings a rival. Your plan of cutting off the stings is old, and fails, I believe, because the bees are just as liable to kill the extra queens as the reigning queen is herself. Your plan of marking the queen is good, if the bees will not bite off the paint or coloring matter. We have tried some such experiments, but the color was gone, after a few days. Perhaps some one else may do better, however.

CHAFF HIVES FOR SUMMER.

"COME, LET US REASON TOGETHER."

THE weight of a man's testimony depends not only upon the man giving it, but more or less upon the importance of the subject upon which it is given. You know, friend Root, that among your many bee-keeping friends there are many who will declare, upon their most sacred honor, that they have seen and held communication with their departed friends, and yet you are not a phenominal spiritualist. Should I report, next May, that every bee lived through the past winter, would that prove my method a practical and reliable success every time?

Does the following prove that all methods of wintering are worthless? From *A. B. J.*, 1881, p. 69, I quote:—

"There is not a live bee in all this county. * * * * Regardless of packing, putting away in the cellars, or any other plan of keeping, nearly all die with plenty of honey in reach; and in my case they had bee candy. The long confinement and cold weather, with not a first-rate quality of honey to winter on, has been the trouble."

Does the fact that a bee-keeper at Plainwell, Mich., lost nearly every one of 90 colonies, packed in chaff, argue that we should not use chaff? I have lost only two colonies yet, out of 212; and the 5 or 6 that showed signs of dysentery, now seem free from it. My idea is, that they have eaten up to a change in food. The "cold and confinement" have been relentless.

But, to go back and "reason together" upon the chaff hive. What the least trustworthy man can *prove* through reasoning upon causes and their effects, *must* be convincing. That kind of evidence is of the greatest value.

Last August, one hot day I stood in the apiary of a friend who had a goodly number of colonies in chaff, Langstroth, and other single-wall hives. I noticed that the colonies in chaff hives lay out the same as the others. All were shaded, as *all* hives should be, at that time of the year. I reflected on what I had heard about the "chaff hive in summer." I looked at two walls with chaff between. Bees on one side and a temperature of 94° F. on the other. Of course the colony created a greater heat inside than the sun did out; hence the sallying out of the bees. Now, I can not see how these walls can keep bees cool in summer, as long as they can not bear the degree of heat they themselves produce. Isn't it like the darkie's cap, "as good to keep the heat out as the cold out"? By and by I found a chaff hive in the sun. Then I thought that the *one* outside wall must warm the chaff next to it. Then I said, "Would some holes in the top and bottom of the wall to let the heat out, do any harm?" "No." "Then the outside wall would shade the inside one." Now, would it do any harm to change the position of the outside wall, as it shades the inside one? Or in other words, is not a single-wall hive shaded, better than a double wall unshaded?

Twelve years ago, we made a few hundred double-wall hives packed with paper. I believe Mr. Langstroth tried charcoal, it being a great non-conductor. Both plans were abandoned. I think the chaff hive is much better than either of the above, as it is a better conductor of heat.

In regard to the sugar syrup: If you make 1½ lbs. of syrup from 1 lb. of sugar, the *bees* must reduce to less than 1¼ lbs. before capping. The coarse outside boxing system costs not to exceed 2c per hive to manipulate. Would not the interest, taxes, insurance, and wear, on the extra cost of expensive hives, amount to more than that? **James Heddon.**

Dowagiac, Mich., March 7, 1881.

I hardly expected, friend H., that the chaff hives would make any perceptible difference during a protracted warm spell, but only that when the sun struck directly on them in the middle of the day, it would drive the bees out less than if they were single-walled hives sitting in the sun. The great advantage of chaff hives in the summer is in keeping the surplus boxes warm all night, and during the cool nights and days, that we often have right in June and July weather. See the following from the A B C book, and Doolittle's reply to it:—

> I have obtained more surplus honey with this arrangement than with any other, and am firmly persuaded that a great loss of honey often results from allowing such a draft of air through the hive, that the bees can not work the wax, unless during the extremely warm weather. To test this matter, I covered a large colony in the house apiary with woolen blankets while they were gathering clover honey, to induce them to remain in the boxes, even after the weather had turned quite cool. So long as the blankets remained on, the bees would remain in the boxes working wax; but as soon as the blankets were removed, at each time the experiment was tried, they retreated to the body of the hive. The same thing was tried with thin-walled hives out of doors.—A B C, page 257.

You are just "shouting" here, and this is one great secret of success in getting box honey.

(G. M. Doolittle, in review of A B C book.)

Also the following extracts from back volumes:—

CHAFF HIVES AHEAD AGAIN FOR COMB HONEY.

I have 64 colonies, one only being in a chaff hive. It has been a very poor honey year with me. I have taken only 600 lbs. of comb honey, and 72 lbs. of it came from the chaff hive. **A. M. Sawdey.**

Poolville, N. Y., Dec. 9, 1879. —Gl., p. 31, Jan., '80.

We advocate protecting bees from the cold blasts of winter and the scorching rays of the summer sun, but the intermediate temperatures we say but little about. I had one colony, this spring, in a Langstroth hive, so reduced in numbers that all must stay at home to keep the brood warm and alive, no increase in stores being possible. This seemed to manifest itself particularly on windy days, of which we have had many this spring. I removed them into a chaff hive, and ever since then as many workers have gone out from this colony as from others twice as strong. **J. L. Hartwell.**

Odell, Ill., June 9, 1879. —Gl., p. 260, July, 1879.

Without doubt, the chaff hive would keep bees exactly as well, unpainted, but as a matter of durability, as well as looks, I would want hives painted, any way. Painting the outer wall of the chaff hive does not, of course, affect its absorbing power, as it does single-wall hives, because it is purposely made in narrow strips of siding. Again, where there is an outer shell to be fetched and put on, even though it be but little trouble, the average A B C scholar is very much inclined to put it off, forget it, or perhaps delay it altogether. Our chaff hives can be inspected as quickly as you can raise a quilt with one hand and turn back the mat with the other. At the same time, friend H., very many will perhaps prefer your plan, and it actually is very much cheaper, especially if you want no upper story to hold the same size frames.—I presume you are about right, in saying 1 lb. of granulated sugar would make only about 1¼ lbs. of stores, when sealed up in the combs; but am I not right in saying that this 1¼ lbs. will go further than even 1½ lbs. of the best honey? This is pure cane sugar, while honey is, a large per cent of it, composed of grape sugar.

BEES IN TEXAS.

ALSO SOMETHING ABOUT YOUNG CYPRIAN QUEENS.

My bees have passed through the cold winter in the best condition possible. It is true I lost one colony out of 23, but the queen was not very prolific, and it seemed her bees would allow the others to take their stores without any resistance. My stocks are all strong, with from three to five frames of hatching brood, March 1st. The queens began laying the 20th of January. I had two young Cyprian queens mated Dec. 8th with pure Italian drones, that are now ahead of any other queen I have. They have thousands of young bees, five frames of sealed and hatching brood, and the young bees are simply beautiful. These queens were wintered in three-frame nuclei hives with empty box placed over them, sides and top packed in cotton seed. I packed about half of my hives in cotton seed; the others were wintered with woolen cloths on the sides, and chaff cushions on top. The cotton-seed hives have wintered almost without any loss, and the queens began laying about a week to ten days before the others. To-day (March 1st) my bees are pouring in and out of their hives, loaded with pollen and honey. One hive has gained 15 lbs. in ten days. They began bringing in pollen the 2d of

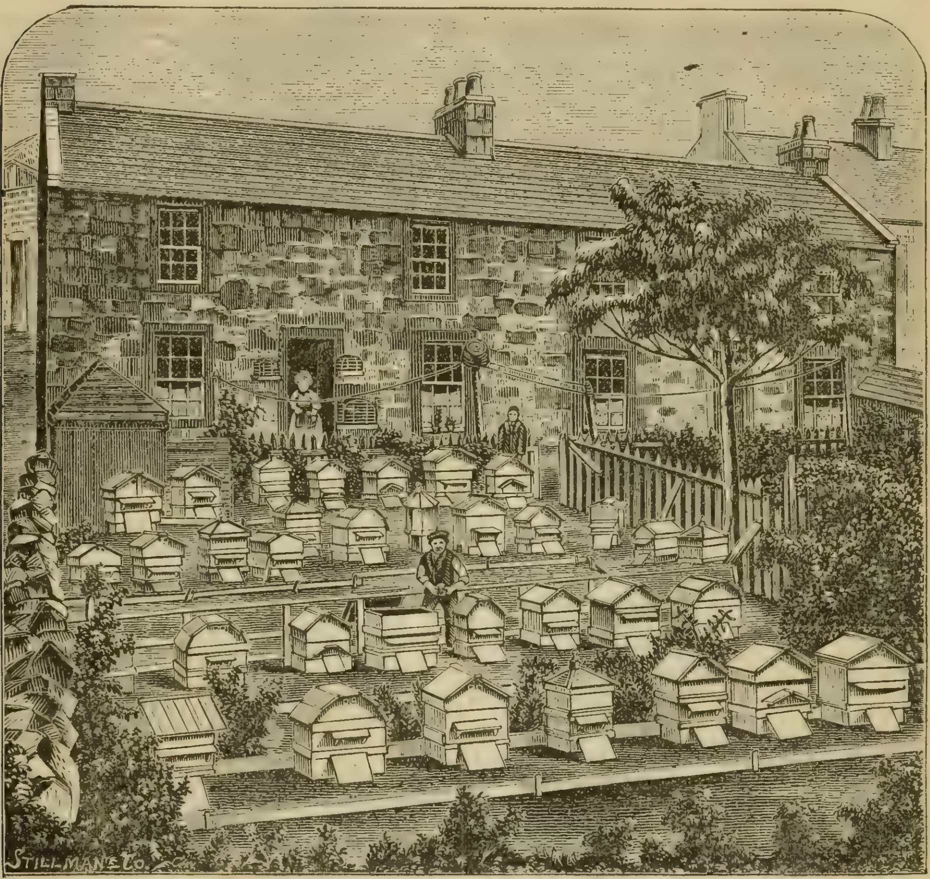
Feb., and have continued, with a few days' exception, to the present time.

CAN A QUEEN REARED IN THE FALL BE FERTILIZED IN THE SPRING?

I thought you said young queens, wintered over before laying in the fall, would be drone-layers and worthless? Now, the two queens above alluded to are truly an exception, for I would not take to-day $5.00 for one of them; if she continues laying at the rate she is now, she will have her hive *chuck* full of bees in three weeks more. The peach, plum, apricot, and almond trees are blooming. The red elm has been in bloom ever since the 1st of Feb. I look for a large increase of bees this spring, and am preparing to increase my little apiary to 50 hives, which will keep me busy, and cultivate 7 acres in corn, 5 in cotton, 5 in honey-plants, and one in potatoes, and ½ acre in garden truck, with 5 acres in fruit-trees, to plow over three times, and 100 Simp. hives to make, and 60 acres of oats to sow this and next week; so you see I have my hands full. B. F. CARROLL.

Dresden, Navarro Co., Texas, March 1, 1881.

Glad to hear you are prospering, friend C. My remarks you allude to were to the effect that no queen that goes into winter-quarters, unfertilized in the fall, can ever be fertilized in the spring, for the simple reason that she will have passed the age when fertilization is possible. In your warm climate, where bees may fly every month in the winter, it would, of course, be quite a different matter.


STILLMAN & Co.

A SCOTTISH APIARY.

OUR BEE FRIENDS IN SCOTLAND.

A PEEP INTO A COSY BEE-GARDEN, AWAY ACROSS THE WATER.

FRIEND ROOT:—Enclosed find photo of a Scotsman's apiary—34 hives huddled together in a small cabbage-garden, right in a small town. The owner, Peter Alexander, is a journeyman shoemaker in rather poor health, but he hopes soon to be able to give up his unhealthy trade and live by his bees. He gets GLEANINGS, and will be mightily pleased to have you just mention his photo. Many of his hives are very expensive ones, $15.00 and over, but they are his pride. His town is called Kirriemuir, in the county of Forfar. WM. RAITT.

Blairgowrie, Scotland, Dec. 31, 1880.

Many thanks, friend Raitt, and you just tell friend Peter that, if I mistake not, there are more than one whose eyes rest on the beautiful picture above, who are mightily pleased at the view he has given us. Why! one almost feels like walking up and shaking hands, not only with Peter, who stands with something in his hands near that hive, but with the good lady in the doorway, and that modest individual in the background. I can hardly decide whether it is the fear of stings or the fear of strangers that makes him so prone to stand back out of sight. And those hives! Did you ever! No wonder some of them cost over $15.00. Are they not pretty? Why, Peter, I almost feel as if I should just like to live with you all the while. I wonder if it shall ever be that I may make a visit to these many friends away across the seas. Oh how gladly would I do so, if it were God's will that I should even make you a brief visit! Go on, friend Peter; be careful and prudent, and remember the promise, that those who are faithful with a few things shall, in due time, be made ruler over many things.

Juvenile Department.

I AM 8 years old. I have three brothers and one sister. When the bees sting father around the face and eyes it swells all up. Mother read to me about a little girl named Louie in your GLEANINGS. I have not any bees yet, but father says he is going to give me a swarm of bees. He says he is going to give me a grapevine too. Mother is teaching school this year, and I am going to her. I am studying the Third Reader, and spelling, geography, and arithmetic. When father transferred the bees I washed up the things and made vinegar out of the sweetened water. I sell my vinegar to grandpa, and I get my money from him. I am named after my grandma. What is your little Blue Eyes' name? I like to go to Sunday-school. I got the prize there for the best lesson. My name is

ELLEN CHRISTINE WILDER.

Forsyth, Ga., Feb. 22, 1881.

Very good, Ellen. Blue Eyes' name is Constance, but we call her "Connie," as you will see in the back part of the A B C book. That is a first-rate idea about the vinegar, and I hope you will keep on making it, so that no honey is wasted. We send you a book too.

I read a good deal in the bee papers papa takes, and I see letters from other little boys, so I thought I would write you a little about our bees. We have had a very hard winter, and papa has worried about them ever so much. Last year our bees did finely. Papa packed down 33 stands in flax chaff in the fall, with chaff cushions on top. To-day, Sunday, is the first day that has been warm enough for them to fly, although it snowed yesterday. So papa came right home after church and took off the top cushions so the sun could shine right on top of the frames. You don't think papa did any thing wrong, do you, Mr. Root? To-morrow it may be cold again, and the bees have been shut up ever since November. Papa says they were in good condition. He found one swarm dead, and that was starved. Papa says he must have overlooked it in the fall, for it did not have honey enough. I am ten years old. ROY MORRIS.

Rantoul, Ill., March 6, 1881.

Very well done, Roy. I am glad that you thought about it being Sunday when your father opened the hives, for it shows that you have a wish to remember the Sabbath day to keep it holy. When our domestic animals need care on Sunday, it is perfectly right to give it, for the Bible says so; and if the first day the bees could fly came on Sunday, and your father judged they needed care, it was perfectly right to give it. I would make it a point, however, when it is any way questionable about Sunday work, to be sure to err "on the Lord's side."

We have had Sunday-school here all winter. I like to go. Our bees are not doing very well this winter. We have part of them in the cellar, and some of them in the room. Those in the room got to coming out, and we had to take them out. We take the bee journals. I like to read about the bees. I have to read it for papa. I like to read for him about the bees. I like the bees when they don't sting. Papa says they don't hurt him, but they swell on me, and you bet it hurts too. We have lost about 15 stands of bees this winter. Bees are all dying off around here. I like to read the Home Papers. Papa says if his bees don't all die he wants some queens and some flower-seeds that are good for bees to work on. Grandpa has got two stands of bees. Papa has got one stand of Italian bees. He sent for two queens last summer, but only one of them proved to be good. MINNIE E. LEE.

Grant City, Worth Co., Mo., Feb. 28, 1881.

I am a boy 14 years old. I have one colony of bees in good order. I have them packed in chaff on their summer stand. They made 40 lbs. surplus comb honey. I expect to be a bee-keeper. Bees do not sting me very much.

WHY COMBS GET BLACK.

If I may be excused, I do not think that Mabel L. Nelson is quite correct about the cause of comb getting black. The reason is, that the larva spins a fine silken cocoon, so thin that it takes several years to reduce the size of the cell so that we can notice that it is any smaller. This cocoon is left in the cell, and gives to the comb a dark color. The bees clean the cell out again before it is used. The honey in this comb is as clear as that in new comb. The comb is tougher after it has been used for brood. EDDIE JACKSON.

Fairland, Ind., March 5, 1881.

Very well done, Eddie. Your reasoning would do credit to an older bee-keeper, and your crop of honey from your one chaff hive does credit to both you and the hive, during such a season as last.

Mamma was reading to me from the Juvenile Department, and I thought if other little girls could write I could. I am only eight years old, and can not write very well, as I am left-handed, and mamma says I must write with my right hand. I would like to know all the little writers in GLEANINGS. We have no bees, but papa wants to get some, and that is why he sent for your book. I think the pictures of Mr. Merrybanks are very funny.

ANNA SPENCER.

Hockingport, Ohio, March 7, 1881.

That is a very good letter, Annie, and we send you a book called "Sheer Off." See if you do not almost feel like crying when you read about poor Nora Peel.

When I was eleven years old a swarm of bees went across the street and clustered on a little cherry-tree. I took my hive and smoker over, and went to work hiving them. I shook them several times, and they went in the hive pretty well. The rest I smoked down.

When they all got in the hive I threw an apron over the front of it, and carried it across the street and set it in its place. Well, in all the work I did not get stung once. I like to hive bees when they are good natured. I have not hived any more alone, but I help in hiving them. Will some girl or boy tell us whether they can hive a swarm of bees alone? If they can, I wish they would please tell us how they do it.
LIZZIE HARRISON.

Peoria, Ill., March 11, 1881.

Well done, well done, Lizzie! and since I come to notice your name and address, it strikes me that you must be Mrs. L. Harrison's little girl; is it not so? I really do not wonder you have energy, and are not afraid of bees, with such a mother as you have.

I am a little girl 12 years old. My pa takes GLEANINGS. I go to Sunday-school almost every Sunday. There are from 75 to 100 scholars. I like my superintendent. Pa keeps bees, and last spring he put them in an L. hive, and they made 150 lbs. Can any one beat that? He would like your A B C book, and he intends to send and get it when he has enough money.
NETTIE WAKEMAN.

Ouaquaga, Broome Co., N. Y., March 7, 1881.

Very good, Nettie! If your father can do as well as that every year, he will hardly need an A B C book. I really hope he will get some more money; don't you think I am very kind?

Ladies' Department.

MRS. LUCINDA HARRISON TALKS TO THE JUVENILE CLASS.

WE think, Mr. Editor, that our young friend Mabel, of Wyandotte, Kansas, is a very observing little girl, and partly correct, with reference to "dark honey." We know that bees clean and varnish up their combs, but they are destitute of scrubbing-brushes, hot soap-suds, and boiling water, for their necessary spring cleaning. Where hives stand like ours, in a city, amid coal smoke, soot and dust, and especially after a long, cold winter like the one just past, with so few cleaning-house days that the bees could not carry out their dead and comb-cappings (and it is now saturated with moisture, rendering the task too great for their strength;) if the bee-keeper does not come to their assistance, no snow-white combs will gladden his eye or tickle his palate. How can the bees prevent soot and dust from shading the honey if they have to walk over a filthy floor to deposit it, or keep their feet or antennæ clean? After a mild winter, with plenty of cleaning-house days, their floors are tolerably clean; but a winter like the past produces a very different state of affairs. The winter of 1879-'80 was mild, and bees were healthy. When we cleaned the hives in the spring, we came to the conclusion that healthy bees voided their fæces in a dry state, judging from the little mounds of an inch or so in height, invariably found underneath the cluster. On hearing such remarks as this about a neighboring apiarist's honey, "I'd as soon have soap-grease in my store as that man's honey; I could neither sell it nor give it away," we concluded to pay the apiary a visit, and see what was the matter. We found the apiary to be a large one, in a first-rate locality; the colonies were immense, and tons of honey on hand, but none first-class. The hives were black, dirty old things, innocent of paint, and had never been cleaned. The surplus honey was permitted to remain on the hives for months after the boxes were filled, and uncompleted ones during the winter. This bee-keeper came very nearly being in the same boat with another old settler of the brimstone persuasion, who says, "When I used to tuk up a gum, I could sell the honey; but I can't do it any more. Why?"

My dear Mabel, Hare Bell, or Blue Bell, when the weather is warm and pleasant, remove your bees to another hive, and then scrape the old hive as clean as you can get it, scrubbing it afterward with a brush and hot soap-suds, and finish by scalding with clean boiling water. This will kill all the bees' "bed-bugs," and when the hive is dry you can return the bees to it, and they will thank you with their happy hum and shaking of their antennæ, and repay you with storing beautiful honey in snow-white combs. "Thus endeth the first lesson."

Peoria, Ill., March, 1881. MRS. L. HARRISON.

Now, Mrs. H., while the veterans may not all exactly agree with you in regard to the propriety of cleaning off the propolis from the cracks and crevices of the hives, which your hot water and soap-suds might do, we certainly all agree in regard to cleanliness being next to godliness. The question has sometimes been asked me, as to why I always have women in almost every room in our factory; it is because men and boys will not, as a rule, be clean and neat in their habits. As our wax-room is not a very pleasant place sometimes for women, we tried for awhile having only men take care of the room. Of course, they did pretty well (we always do;) but after awhile I offered one of the girls a little better pay, just to take a kind of supervision, you know. Well, the first thing she did was to move the boxes and pails out of the corners, and give the room a tremendous sweeping. Why, I just felt happy to see her do it; and after she got through, it seemed so much more homelike, I could have sat right down in the middle of the floor and laughed, and I should not have stuck fast either. Since then, I have a sort of feeling that I do not want to live—no, nor even work in a room, where there are not some women around. Somebody once said my wife was such a good housekeeper she had spoiled me; but I do not believe it, do you, Mrs. H.? Now, begging your pardon, we are all ready for the next lesson, are we not, Mabel, Freddie, Louie, Jennie, Charlie, Ellen, Roy, Minnie, Eddie, Anna, Lizzie, Nettie, and the rest of you?

IT is now reasonably certain, says the *Prairie Farmer*, that the manufacture of fine syrups and sugar from sorghum can be made a vast and profitable industry, advantageous alike to the intelligent grower of the cane and to the manufacturer of the products obtained from it, and saving to the country millions of dollars annually which are now sent abroad for these indispensable articles of daily consumption.

DOOLITTLE'S REVIEW AND COMMENTS ON THE A B C BOOK.

Continued from last month.

NUCLEUS.

A good swarm of bees in the Gallup frame will touch the bottom and top of the hive, and also each end where only 9 frames are used, but not the sides; while with the L. frames they touch the bottom and top only.

How is it that you have only seven frames in this hive, when you say you use ten in the chapter on hives?

We usually use but 6 or 7 *brood* frames; in winter, chaff division-boards take the place of the other three, and in summer, a frame of sections on each, outside.

POLLEN.

BASSWOOD YIELDS NO POLLEN.

If I am correct, basswood yields no pollen at all.

BEES ON CULTIVATED-GRAPE BLOSSOMS.

Did you ever see a bee on a tame-grape blossom? Although they get pollen freely from the wild, or frost grape, yet I never saw one on a tame variety.

Yes, sir! they work on our Concords nearly every season.

DO BEES SEE OR SMELL HONEY?

Above, you give that the bees find honey by seeing the blossoms, etc.; but did they go into the honey-house by seeing the bowls and boxes of honey there? I think not, and guess you have got off the track. It can be easily proven, that bees are drawn toward honey by the perfume, for you can place it where they can see it all day, and yet yield no perfume, and not a bee will notice it.

DO BEES OR PLANTS CHANGE THEIR HABITS, UNDER DIFFERENT CIRCUMSTANCES OR SURROUNDINGS?

Is not this figurative language? The touch-me-not is probably just as it was when it was first created; if not, God did not know the necessities of flowers when he created them. That a flower has "learned" how and where to place certain organs to accomplish desired ends is a little strange talk, is it not?

POLLEN AND BROOD IN THE SURPLUS BOXES.

I find it right the opposite. I never had any brood in the side boxes but once in my experience, that I know of, but often have it in top boxes.

PROPOLIS.

PROPOLIS FROM BALM OF GILEAD AND POPLAR.

I have repeatedly seen bees getting propolis from balm-of-Gilead and poplar buds, and a few at work on the horse-chestnut; but this is so sticky they do not like it so well.

QUEENS.

DOES THE QUEEN OR WORKERS DESTROY RIVAL QUEEN-CELLS?

As far as my experience goes on this point, the workers do this destroying of the cells. I know queens do tear open cells, but believe the workers do most of it when the idea of swarming is not entertained.

PIPING OF QUEENS.

I guess no piping is ever heard in a hive till one queen has hatched; at least, I never could hear any, and I have experimented quite thoroughly on this point.

WHAT DO BEES FEED THE QUEEN TO MAKE HER LAY?

What is this food that the bees feed the queen? I claim it is the same as that fed to the young larvæ. When the queen takes honey, she helps herself to it.

AT WHAT AGE DO QUEENS COMMENCE TO LAY?

I once had a queen laying in just ten days from the time the cell was sealed over, or three days after the queen had hatched, and at another time I had one that did not lay till 26 days from the sealing of the cell.

QUEEN-REARING.

INSERTING QUEEN-CELLS AT THE TIME THE NUCLEUS IS MADE.

I have tried this plan till I know that my bees destroy at least nine-tenths of all cells so given, and do not understand why yours do not. With my experience, I should not put such a plan in a book, if I were to write one, but would say, wait 24 hours.

KEEPING THE BEES OF THE NUCLEUS FROM GOING BACK HOME.

I should say that this one would get half the bees that were in the old hive; at least, when I make nuclei in that way the bees seem bent on going back to the old stand; so I generally confine them for the first day, letting them out toward sunset by the second day.

INSERTING A CELL IN PLACE OF ONE THE BEES HAVE BUILT.

That is correct; and I say, wait till they commence to build cells, and you are safe.

ROBBING.

WHAT TO DO WHEN A COLONY CEASES TO DEFEND ITSELF.

I cover the hive all up with a large sheet, and then there is no chance of smothering; and, also, the robbers are not confined to the hive.

A ROBBED COLONY GOING HOME WITH THE ROBBERS.

Did anybody ever know the bees from a robbed hive to go home with the robbers? I never knew such a thing to happen, and doubt its ever occurring.

I have had a few cases of the kind, and several have been reported. Perhaps, friend D., you do not have the experience(?) in robbing we do.

DO BEES DISLIKE SNAKES?

I had plenty of snakes live under my hives the past summer, and the idea that bees dislike snakes is all bosh.

SMOKERS.

SMOKE FOR YELLOW-JACKETS.

Smoke will drive yellow-jackets and bumble-bees much quicker than it will bees, so they will leave their nests entirely — the yellow-jackets rarely returning, but the bumble-bees will return.

STINGS.

HOW DOOLITTLE MANAGES IN REGARD TO STINGS.

This is the way I always remove them; and if you learn by instinct, as it were, to strike your hand against your clothing at the moment you feel the strike to sting, you will, in nearly all cases, remove the whole sting, and suffer scarcely any pain. I always wear a veil, as I don't want them in my face if they did not sting at all.

VISITORS STANDING IN FRONT OF THE HIVES.

This is the worst trial I have, and I sometimes feel like telling such persons that it seems as if they should "know something;" but instead, I request them to come back where I am, only to repeat it when I open the next hive, and so on.

KILLING BEES IN HANDLING HIVES.

I think you make more of killing bees than is called for. When a bee's life is worth more to me than my time is, I take much pains to prevent killing one;

but, on the contrary, if my time is worth more than the life of a bee, the bee is killed, always striving to kill as few as possible consistent with accomplishing what is to be accomplished. We keep bees for the profit there is in them, and that is what they were created for—the benefit of man. Do you object? Let us see: you keep a cow for the profit there is in the milk and butter she affords you to eat or sell; but when she gets old, so as to be of no value for milk or butter, do you keep her for the good she has done? No: you look to the profit again, and fat and kill her, and, as you reason, God should hold you responsible for this act. Why not? Because he has created the cow for the benefit of man, as he did the bees; so when a bee's death is more profitable to me than his life, there is no more harm in killing him than there is in killing the cow.

USING SMOKE IN OPENING HIVES.

I always blow a little smoke under the quilt as I raise it, and after that use no more unless they show signs of stinging. In this way no time is wasted to have them off from the tops of the frames out of the way. Any colony can be subdued by blowing in a little smoke at the entrance, and closing it, and then rap on the hive a few times. In two or three minutes you can do any thing with them.

SWARMING.

NON-SWARMING HIVES.

Why not say bees swarm because it is God's plan to keep them from becoming extinct, as much as it is his plan for the birds to return to us each spring, mate, and raise their young? With an apartment that is suited to the bees for all seasons of the year, that is not enlarged or contracted by man, the bees invariably swarm if the season is propitious, and all the combined ideas of man have not as yet been sufficient to produce a non-swarming hive when worked for comb honey, that was reliable.

DO BEES WORK LESS THE DAY THEY ARE GOING TO SWARM?

I never could see a bit of difference as to the work of a swarm, and I have watched closely to see, when I knew a swarm had a sealed queen-cell.

BEES SWARMING BECAUSE THEY HEAR OTHER HIVES SWARMIMG.

No mistake, as far as my experience goes.

FIRST SWARMS ISSUING TWICE ON THE SAME DAY.

I never knew but one first swarm to issue the second time on the same day—a returned swarm, I mean.

REMOVING THE QUEEN WHEN BEES ARE AT WORK IN THE BOXES.

Both Elwood and Hetherington now take away the queen from their stocks at work in boxes during the basswood bloom, and claim that is the correct way to get box honey with no swarms. I do not yet agree, but may some time.

EXTRACTING THE HONEY TO PREVENT SWARMING.

I don't agree; your extracting reduces them, for the time being, to a state of poverty, the same as a dearth of forage; hence, all idea of swarming is given up the same as it is when the flowers yield no honey, on the principle that God has given them knowledge enough to know that they can't prosper outside of the old hive without a yield of honey.

TEASEL.

I have never known it to fail but one year during the past eleven years, the time I have kept bees.

These road-side teasels are wild teasels, on which I never saw a bee in my life. These have a blue blossom, while the tame, or Fuller's teasel, have a white.

TRANSFERRING.

DRUMMING THE BEES OUT, IN TRANSFERRING.

Why don't you drum out those bees to start with, and have them out of the way?

Because I like the way I have given, best.

DOOLITTLE'S NATURAL COMBS, VERSUS THOSE BUILT ON FDN.

I have 1000 that I would not trade with you even handed at venture, for they are perfection.

If you had to buy your fdn., I think you would save all the comb you could.

The drumming is done by getting off the side of the old hive, and getting the nails out of the cross-sticks so no time is wasted.

UNITING BEES.

Alternate the frames, and thus mix the bees thoroughly, and they will never fight at any time of the year.

But they do *sometimes*, friend D., *with us*, nevertheless. I wish you would try uniting Cyprians in that way.

LOSING QUEENS WHEN UNITING BEES.

I never lost one in my life.

WHEN TO UNITE BEES.

I don't agree. August is the time to unite bees, as I gave in *A. B. J.*, Oct. No. The first part of Sept. would do, where fall flowers are abundant.

It is far easier to unite bees in the brood form in August than in the bee form in October, for the brood the last of August are the bees of October.

VEILS.

I use the grenadine for the whole veil, and wear one most of the time.

USING SHEETS OF MICA IN BEE-VEILS.

The mica does very well in hot weather, but in cool the breath steams it up so it is entirely useless.

VENTILATION.

KEEPING SURPLUS BOXES WARMLY PROTECTED, WHEN THE BEES ARE STORING HONEY.

You are just "shouting" here, and this is one great secret of success in getting box honey.

VINEGAR.

Vinegar is also used for cleansing wax. See p. 269.

WATER FOR BEES.

EVAPORATING THIN, NEWLY GATHERED HONEY.

For my views on this matter, after conducting many careful experiments, see "Evaporating Nectar," on p. 172, Vol. 3, *A. B. J.*

WINTERING.

FEEDING UP FOR WINTER.

Why not feed the whole 20 lbs. in one or two nights if they have plenty of comb room and plenty of brood and young bees? That is the way I do.

CELLAR WINTERING, AND OUT-DOOR WINTERING.

Notwithstanding there are probably at this date more bees wintered in cellars than any other way, I winter half of mine in a cellar, and half on summer stands, so I am sure of being right in one place or the other every winter.

DOOLITTLE'S BEE-CELLAR.

My bee-cellar has not raised three degrees during the winter since I built it, and we have had weather all the way from 20° below zero to 65 above. Two or three days of 65° above does not affect it a particle; I do not use a stove as do Elwood, Root, and others.

WHY BEES WINTER WELL ONE WINTER, AND DO NOT ANOTHER, UNDER THE SAME CIRCUMSTANCES.

This is candid, and I agree exactly. No one can tell why two swarms, sitting side by side, as near alike as two peas, should not winter alike; and yet, often one dies before March, while the other comes through a splendid colony.

FASTENING BEES IN THE HIVES IN WINTER.

Packed in chaff, as you propose, bees do not need an entrance at all, especially in the cellar, and out of doors only where they can fly. Hence I close mine as tight as I can make them at the bottom in cellar, and generally do those out of doors.

WHEN TO TAKE BEES OUT OF THE CELLAR.

As you advise waiting till pollen is plenty (which advice is good), your advice as to the time of day in putting out is bad, as it is so warm at this season of the year that robbing will likely result from those set out previously, or from those wintered on summer stands. Set out when sun is an hour high, on a warm day, and they will have a nice fly, and protect themselves the next morning.

WEAK COLONIES THAT CONSUME SCARCELY ANY STORES, COMPARATIVELY, NOT BEING OF MUCH VALUE.

Beg pardon, but this is not so. The colony that consumes the least stores in cellar wintering is always the best colony in the spring, and the one that will remain quiet till pollen is plenty. Now set them out, and you will have no spring dwindling, but each bee in the hive will be strong and vigorous, and as the weather is warm, they rush things.

I agree with this, but my remarks were meant to apply to those so small they could not need much.

NO. OF STOCKS IN A PERFECT CELLAR, NOT IMPORTANT.

With a cellar like ours it makes no difference whether there is one or 100 colonies in it, as it is not dependent on the bees for warmth, but it is the temperature of the ground at a depth of 8 feet, and that temperature is from 43 to 45 degrees above zero.

BEES THAT ARE FOUND ON THE FENCES AND WALKS IN THE SPRING, LADEN WITH POLLEN, ETC.

I believe these bees die of old age, caused by a used-up vitality from holding the excrement so long, as I gave in the *A. B. J.*, which friend Root and others "blowed" about so much. If you will consider, you will see that all evidences point that way.

SAVING SOILED OR MOLDY COMBS.

This sounds better than what you say on page 250. I believe it well pays to save all pieces of worker comb 6 inches square. This you *save*, while fdn. costs money.

Conclusion.

G. M. DOOLITTLE.

Borodino, N. Y., Nov. 1, 1880.

"OUR BEES."

FROM AWAY DOWN IN FLORIDA.

I BOUGHT them last February, and paid $5.00 for three boxes of bees. Also another, badly infested with moths, for which I paid nothing. From this one I drove out the bees, took out the comb and killed the moths, replaced the comb, and returned the bees. In moving, the comb broke down in one box and killed the bees. We moved them by boat 20 miles. Three swarms at home were soon all right and at work. There is nothing peculiar about them, only they are *our bees*. We had been housekeeping 35 years, and these were the first bees I ever owned.

Their home is our "Island Home" on Merritt's Island, in Indian River, Florida. This is not only a land of flowers, but of sunshine. This is true of all Florida in a general sense, but it is particularly true of Indian River. The showers of summer are much alike in all parts of the State. But in winter, when old people, invalids, and bees, need sunshine, it is most abundant here. The sunshine of winter is diminished on the Gulf coast by fogs, and in the northern part of the State by cloudy, rainy weather. I am confident that no part of the American Union has as many hours of sunshine, particularly in winter, as this Indian River country. Perhaps I don't know, but I have lived in ten of these United States, and made the study of climatology a specialty for years.

Our bees, then, have plenty of sunshine, and that, too, when it is most enjoyable, most conducive to their prosperity, and makes *wintering* a subject of quite another aspect as compared with Ohio. It is even quite different here from what it is in the northern part of the State. All that part of bee literature that relates to wintering is of no value to us. Every letter I get from the North tells of a terribly cold winter; but here, more or less bees could be seen on the wing nearly every day, and choice tropical and hot-house plants have bloomed in our yard all winter. Of tropical fruits, we have in cultivation the guava, pine-apple, cocoanut, mango, sapodilla, cheremoya, and coffee; none of which show any marks of frost. So you can see that winter is really eliminated from an Indian River year, and that, too, when even in Florida not less than a million of oranges were ruined by being frozen. This much about winter and wintering. Now for the summer. The two best colonies gave us two more in May. These were hived in boxes, which they filled in a very short time with the finest honey I ever saw. It was from the saw palmetto (*Sabal serrulata.*) It was thicker than white-clover honey, equally as light color, with a peculiarly rich flavor. The saw palmetto is very abundant here, and the books say it blossoms from June to August; but here it blooms from February to June. The cabbage palmetto (*Sabal Palmetto*), from some cause bloomed but little in this region. Early in July we transferred the five colonies to movable-frame hives. Before and at the time of transferring we took from them about 100 lbs. of honey. July and August are said to be bad honey months here. During these months they about hold their own.

The partridge pea (*Cassia Chamœcrista*) is abundant in this region, and blooms mostly in August; but these and all other flowers were destroyed by the terrible gale of August 29. About this time we made a sixth colony by dividing. They went to work as best they could, and seemed to be doing as well as any of them; but none of them did much more than get their living. As the weather grew cool they were cross, and I gave them little attention until Nov. 20, when I opened my eyes to the fact that *our bees* were starving! One colony was already dead, and others fast going the same road. We began at once to feed them with sugar-cane syrup, on which they lived and prospered.

Dec. 24. Looked them over and found brood in two of the hives.

Jan. 1, 1881. They are beginning to work quite briskly. The West India pea-tree, called the pigeon pea (*Cajanus indicus*), blooms all winter and affords good bee pasture. Of these we have a few. A few citron (*Citrus medica*) blooms begin to appear, and these afford both pollen and honey. So also the lime (*Citrus limetta*), and the lemon (*Citrus limonum*), furnish both pollen and honey and are beginning to bloom. A few blossoms of the Spider plant (*Cleome pungens*) have made their appearance. In the West Indies, its native habitat, this plant is called "wild massambee," where it blooms the whole year. Beyond these and a few other flowers in the yard, I do not know where they obtain their supplies. No more feeding is necessary.

Jan. 15. Found brood in all the hives. In one, three frames of brood in all stages, and quantities of young bees.

Feb. 1. The saw palmetto is beginning to bloom quite freely, and the bees are having a grand time. They are at it early, and hurry as if it were harvest time. Bright sunny weather, ranging from 65° in the morning to 75° at noon in the shade.

It is noon, Feb. 25th, and orange-trees are blooming, and the bees are happy. Present indications are that they will now have a continuous harvest until the middle of June. And were it not for the uncertainty of counting chickens before the eggs are laid, I would tell you how much honey they will gather. It is safe to say we shall have all we can eat. JAS. H. WHITE.

Island Home, Brevard Co., Fla.

FRIEND JACKSON'S TALK TO THE A B C AND OTHER CLASSES.

WHICH IS THE BEST SMOKER?

IN regard to the best smoker (see E. Cadwell, p. 84, Feb. No.) I would say I have used the Simplicity cold-blast for the past two seasons; it has given entire satisfaction. I have gone one mile without its going out when I was out transferring bees. It has never been out of order. I find all work best with good fuel. Rotten wood is best.

HOW TO GET RID OF A FERTILE WORKER.

To remove a fertile worker, take a strong colony, cage the queen, and exchange places with the one that has the fertile worker. In 24 hours release the queen with the same care as when introducing. The one with the fertile worker should be given a frame of young brood and eggs, and placed on the stand where the strong colony was removed from. The old bees coming in will destroy the fertile worker. In the evening, place a caged queen in the hive, and introduce in the usual way. I have never known this plan to fail.

LEARNING THE TRADE.

I fear two many of our young bee-keepers do not realize what it is to learn bee-keeping. I have worked at the watch-maker's trade for over 20 years, and do not know it all yet. I have taught several young men the trade, and the most of them think they know more in six months than they do in ten years. They soon think they should be allowed to set the jewels and put the new staffs in the balance-wheels. While watch-making is a very fine trade, I think it more easily learned than bee-keeping. I do not say this to discourage any one, but that they may be more careful, and go slowly. I have been watching the new beginners very closely through GLEANINGS, and have learned many valuable lessons through the failures of others. I have kept run of many, and can see the cause of their failures. I think one or two colonies are far better for any one to begin with than ten or twenty. Then be in no hurry to increase; if you double your number each year, the bees will increase as fast as your knowledge. If we could spend two years with some good apiarist, I think we might be safe in starting an apiary of our own with 25 or 30 colonies, provided we take and study the journals. We could then see the cause of success and failure, and, with the good advice of the editors from time to time, we need have no fears of blasted hopes.

BOX HIVES TO START WITH.

Now, friend Root, I do not think your advice to L. S. Smith pp. 135, 136, of March No., very good. I will admit that, when he can manage bees in the box hive he can in any other; but how is he ever to learn how to manage them in the box hives? It is like learning to swim before going into the water.

This being a very severe winter on bees, I think it a good time to notice something about what kind of a frame is the most successful in wintering. I have worked on the plan of testing all things before adopting. I have used frames from 16 inches deep down to the L. frame, and have adopted the Gallup frame as the most practical. It is easier handled than the L. frame, and for wintering, the bees are far more compact. I packed 19 colonies in chaff on their summer stands, and in the Gallup frame, about Oct. 20, and did not get to examine them till Feb. 26; then I found 17 as strong as they were in October; 2 had lost about ¼ of their bees, and one queen was lost. They all had brood in all stages, except the queenless colony; but none have enough to hurt them much. I would rather my bees would not rear much brood before April.

I like the new cover on GLEANINGS much better than the old one. It looks cleaner and neater.

THE JUVENILE DEPARTMENT.

I do not think you can give the juvenile class too much encouragement. Once get our childeren interested in the study of bee culture, and we are on a "specie basis." I like your idea of giving them book presents for their letters. It gets them more interested in the works of God. Once get them thoroughly interested in such studies, and we need have but little fear of the haunts of the bar-room and gaming-dens.

LADIES' DEPARTMENT.

My wife thinks the Ladies' Department should receive more attention. Many of the ladies could write as good letters as the men; and it would be more encouragement for the ladies to study bee culture if they knew what others are doing. Many of them could make a far better living for themselves than they do at much harder labor.

My wife has two colonies that she is learning to manage. She thinks your Homes is one of the best departments you have. My daughter can beat any of us catching the queen when the bees swarm.

Fairland, Ind., March 7, 1881. L. R. JACKSON.

You misapprehend my remarks in regard to box hives, friend J. I expected, of course, the beginner would transfer them, and it was that he might go through with this operation, and thus gain experience while he saved expense, that I gave such advice.

Heads of Grain,

From Different Fields.

I HAVE often thought of writing to you about the box-elder, it being, in my mind, a first-class bee-tree; but I had never seen any thing upon the subject from others. Now I see that R. H. Mellen, in March GLEANINGS, brings up the subject, and his views coincide with mine exactly. The tree is perfectly hardy, and its greatest virtue as a bee-tree is, I think, in blossoming so much earlier than anything else; and, as friend Mellen says, one can cut a slit in the tree and have a flow of sap that will keep the bees humming. I think it would not be advisable to cut the trees much until they are of good size. They are, however, a rapid-growing tree and soon attain a good size. I have a little over ¼ of an acre, set 4 ft. apart, the trees seven years old from seed, and from 15 to 25 ft. in height, and, of course, being so closely planted, are rather slender. In spring they are one mass of blossoms, and the bees go wild over them. I have sold a good many of them, and given away a good many more. I live in a region of box-elders. I can get seed by gathering it. I have a great many seedlings, and I have this spring about 1500 or 2000 more that I want to set out, and I will send, to any one who wishes to try a few, 10 nice little trees for enough postage-stamps to cover expense of wrapping and postage,—say about four 3-cent stamps; or, if you think I can do it for less, say so, and I will try it. You have sent basswood trees by mail, and know how much it costs to dig, pack, and mail them. I should not like to agree to send them for much less than the sum mentioned, as I am a busy man, and I am afraid I could not afford the time.

Perhaps, friend Root, you will think my object in writing this is to get a free advertisement, but it is not. I have advertised catalpa seedlings in Feb. and March Nos., and have had less than half a dozen orders (unless I count the postal cards I have received telling me to forward trees or seeds as the case may be and they would remit at some future time). I can hardly do business in that way, my friends. So I thought I would not advertise box-elders, but as nearly as possible give them away.

H. M. MORRIS.

Rantoul, Champ. Co., Ill., March 7, 1881.

We can hardly call it free advertising, friend M., when one charges only enough to pay postage and trouble of taking up the plants. I do not think any of the brethren will accuse you of selfish motives in making such an offer.

THE TYPE-WRITERS; DO THEY PAY?

Do you still use your type-writer for general writing, and do you consider it valuable? Do you know aught of Yost's "Calagraph," claimed to be superior to the type-writer? What we wish to know is, whether these machines are pratical in actual use.

H. A. BURCH & CO.

South Haven, Mich., Mar. 2, 1881.

I use my type-writer constantly, and, for aught I see, GLEANINGS would well nigh be a failure if I were to be deprived of it. It enables me to write very much faster than I ever did with a pen or pencil, and the muscular exercise needed to work it is quite a relief over the comparatively still and steady task of grasping a pen. On account of the extra rapidity, it is a great help to an author, where ideas come faster than they could ordinarily be jotted down in the usual way. This much in its favor. Now, on the other hand, a type-writer is hardly practical for postal cards, because the labor of fixing it in the machine, and taking it out, is more than when we simply use a pen or pencil. Much the same is true with a letter, unless one has to write quite a long letter. Unless one is an editor, author, minister, or something of the like, I hardly think a type-writer would pay; and where one has the free use of his right hand, and writes easily and rapidly, I am not sure but the type-writer might be laid aside for the more simple implements, even after it has been purchased. I work mine entirely with my left hand. I know nothing of the machine you mention.

HOW TO START SEEDS QUICKLY.

One of our girls who always makes seeds grow when nobody else can, wrote the following to one of our customers, and I have appropriated it for the benefit of you all, as you will see:—

We have just sprouted Simpson seed in 4 days, this way: Take a common earthen flower-pot, with a hole in the bottom. Fill with fine leaf-mold and sand; pour *hot* water on, and jam it down well into the pot. Sprinkle the seeds on thinly, and roll them in; then put a tumbler over it, to fit tight, and set it in a saucer of warm water, always keeping the saucer full. Then set the whole in a warm place, such as the top of the reservoir of the cooking-stove, or on the shelf of the pipe. As soon as they begin to sprout, give plenty of light, near the window.

CHAFF CUSHIONS; WILL THEY PAY AS FAR SOUTH AS GEORGIA?

I read reports in GLEANINGS and *A. B. J.* every week from bee-raisers all over the country, but seldom from my section. According to statements given by some apiarians, of the heavy losses from severe winter, it seems enough to discourage the experienced, let alone the A B C class. Were they all put in Blasted Hopes, that department would swell to a journal of considerable size. In our section, Providence has blessed us with milder winters, and wintering is not so difficult as in your section. In October last I transferred four colonies, and took all the honey from them, the comb being too crooked to put in my hives. I fed them on A sugar; they gathered a little honey until frost, possibly 2 or 3 lbs. Saturday, the 26th, I went into the hives to find the queen laying. Brood in all stages was found. The swarms were in as fine condition as I could wish them to be. I took the precaution, just after the long cold spell (unusual in our climate), to examine and clean out every hive, air them a few minutes, and feed each one pound of sugar, made into candy; the latter, I suppose, "pushed" the queen to a sense of her duty.

CHAFF CUSHIONS.

As bees had always been wintered here in boxes without protection, it was thought that chaff cushions was a hobby of mine. Two hives had cushions on each side, a blanket and cushion on top; one had blanket on top; one with no protection. Result: The first two came through all right, without any perceptible havoc having been made on their winter stores; the one half protected had destroyed about half of theirs, while the one unprotected ate up all; about one-fourth of the bees dead, and the rest too weak to do any thing; but by careful nursing it is now all right. I owe all my success to GLEANINGS and A B C which I have read and re-read with great pleasure as well as benefit. I am studying the subject very carefully, and I do not want my name ever dropped from your subscription list.

Greenville, Ga., Feb. 28, '81. F. M. LEDBETTER.

We are just in receipt of Dr. Chase's second Receipt Book, from the Chase Publishing Co., Toledo, O. The book has been revised, in bee culture as well as some other subjects, so as to bring the whole up to the present time. The subject of "diseases of women and children" has also been revised, and additions made thereto. While glancing through it, my eye caught the following, which some of you have recently inquired about:—

LABELING ON TIN.

The difficulty of making labels stick upon tin arises from the extreme smoothness of the surface; to overcome this inconvenience, roughen the surface with sand-paper before putting on the label. This is a quick process on the tops of tin boxes; but for labeling upon the sides of boxes, or cans, the quickest way is to have the label made long enough to go more than around, the extra part being blank, or without printing, to allow the other end to lap over it, and all is right, even with common paste.

Wetting the tin with common white-wash and wiping off, after it is dry, roughens the tin about equal to sand-papering, as the lime corrodes the surface somewhat.

The price of the book is $2.00, and we can mail it to any address on receipt of price.

MOVING BEES IN THE WINTER.

Please inform me what I can do to keep my bees. I bought 3 hives last fall, and moved them in the winter. Two swarms have died already, and the other is very uneasy, and every warm day the bees come out and do not go back, but try to run away. I put a screen over the box so they can not go far, and they will not go back into the hive, although they have plenty to eat. The other hives that died had 5 lbs. apiece, so did not starve. N. DUNBAR.

Tallmadge, Summit Co., O., Feb. 26, 1881.

It may be that your bees would have become diseased, and died as they did, without their having been moved in the winter, friend D.; but as a great many reports have been given of bees that died after having been moved in cold weather, I think it very likely that it often so stirs them up that it gives them dysentery. It has been suggested that the moving causes them to gorge themselves with honey at a season of rest, and, being unable to fly out and relieve themselves, disease results.

Your bees came out as you describe, because they were diseased; and at such times, trying to confine them in the hives is of no avail. Bees are often moved, however, during winter, without apparent harm, especially if moved in *moderate* weather.

IMPLEMENT FOR DESTROYING THE BEE-MOTH.

I send you a plan of a lamp, etc., that is very useful for destroying moths. It consists of a pan of viscid matter placed upon a stake, which is set in the center of the apiary. A block of wood is placed in the pan, upon which is placed a lighted glass lantern. The moths, being attracted by the light, dash against it and fall into the pan, and are thus destroyed. This lamp, as above, is used in the cotton-fields of the South for the purpose of destroying the cotton-moth (*Leucania umpuncta*), and the plan is given by Daniel Breed, Washington, D. C., in his report upon "Inventions for Insect Destruction," 1876. It will pay to have one burning every warm night in every apiary. Try it and see. N. F. CASE.

Glensdale, Lewis Co., N. Y., March 5, 1881.

Thanks, friend C. The plan has been given, substantially, before. So far as I know, the bee-moth has almost ceased to be called an enemy, unless it is the trouble they sometimes make with combs left out of hives. They do not annoy us otherwise, enough to be hardly thought of, late years. Still, in some localities, the device may be of great value. Without question, a great many kinds of harmless millers will be destroyed also, if, indeed, there are any such. Will Prof. Cook please tell us if all nocturnal moths and millers are of the order of injurious insects?

AMBER SUGAR-CANE IN NOVA SCOTIA.

Like yourself, I am trying to sweeten the general business of life with honey, and syrup from the Amber sugar-cane. In this I have been greatly aided by GLEANINGS, which I have carefully read from its first number to the last issued. Our household has become so familiar with you and your surroundings that you appear more like a near and highly esteemed neighbor than a resident of distant Ohio. But, to business. Last spring we introduced the Amber sugar-cane into this section. It grew well, but owing to late planting and drought did not quite ripen. I put up a mill—a rude one for experiment. The various patches planted yielded from 100 to 200 gallons of syrup per acre. The quality, however, is not up to our expectations. It is about as good as ordinary West India molasses, and quite as dark. I want a sample of the beautiful article you mention in the Feb. No., p. 60. I know the sight of it will encourage the people to persevere. G. C. MILLER.

Middleton, Annapolis Co., N. S., Feb. 26, 1881.

TOADS; HOW TO BANISH FROM THE APIARY.

If they are quite numerous, I get a dipper and go to the cistern and get it full of water; soft water is best. Get some one to accompany you with both hands full of salt. You go first and wet the backs of every toad or frog, and your assistant comes afterward, sprinkling them freely with salt. They will at once start to hop off, and they hop, hop, as long as they live; and when they get far enough away they stop to die, if the dose of salt has been large enough. This, I think, is the cheapest, quickest, and best way to exterminate those "hoptiles."

Please publish this in GLEANINGS for the benefit of toad-afflicted friends. WESLEY BAER.

Benmiller, Ont., Ca., March 4, 1881.

I have no doubt but that your plan will work, friend B.; but really it seems almost as if it was too much like "fun for you, but death to us." Can not these poor dumb friends be carried away somewhere and set at something useful? It is said they are splendid in a garden, to rid it of noxious insects. As I see them in my mind's eye, hopping off by themselves to die, it somehow seems appropriate that somebody somewhere should drop a tear over their sad fate, even if they have been guilty of gobbling up the bees.

SOMETHING ABOUT THE STINGLESS BEES OF SOUTH AMERICA.

We, the Washtenaw Co. [Mich.], Bee-Keepers' Association, met as announced. It was a very interesting meeting, of 30 members. Several papers were read and discussed. Prof. Steer, of the Michigan University, gave a very interesting account of the "stingless bees" of South America, and others, as seen by him in his three years' travels around the world, which he describes as no larger than our house-flies; though they can not sting, they get into the hair and whiskers, and bite. They would be of no account to us, as they make but little honey (and that is poor), but considerable wax, which is black. They build their nests under limbs of trees near the body. He thinks they would not endure our climate.

After his graduation, the professor started, by the way of the Amazon River, with his gun and knapsack. Where conveyance could not be obtained he went on foot. After his return with all his specimens, there was no room in the museum. The State appropriated $30,000 for a new building, which is now being occupied, and gave him $10,000 for one-half of the specimens. It is the largest and best ever collected in this country—animals, fishes, birds, reptiles, minerals, ancient crockery, etc., 20 tons weight. What is especially rare are his birds of paradise, a large number. One can not conceive the exquisite beauty of their plumage and form, if he has never seen them. The professor crossed the Andes, and from Callao sailed for Japan; from there through the East India Islands.

He describes a race of bees in the mountains of Formosa that are similar to ours; they are yellow, like Italians. Their habits of docility are such that the natives breed them in boxes made of slates, along the sides of their huts (like your house apiary), but open inside as well as out, without disturbance to the family. As the climate in the mountains is similar to ours, he thinks perhaps they would be an improvement.

We extended our society and called it South-Eastern Michigan Bee-Keepers' Association. Next meeting the first Thursday in May next.

Ann Arbor, Mich., March 8, '81. N. A. PRUDDEN.

A TELEPHONE DETECTIVE.

I think if friend Baird [see page 97, Feb. No.] had had a telephone running from his house to his "fine turkey roost," he would not have had to resort to the use of firearms; he could have said, "Boys, which turkey do you want?" They would have gone home satisfied.

I took two 1-quart tin cans and wire No. 30, and made one run to the grist mill, a distance of 200 yards. I can, by placing my ear close to the can that is in my house, hear footsteps in the mill distinctly; and when I am at work at the mill, and want any thing from the house, all I have to do is to go to the telephone and say, "Boys!" and here they come with whatever I want. Now, why not have one to run from the house to the apiary, where the distance is so great we can not hear the bees when they swarm? and if any rogues were to come after night for honey, you could tell them where the best honey was. The one I made cost only 15 cents, and has already paid ten times its cost, say nothing of the fun the boys have with it. GEO. W. STITES.

Spring Station, Ind., March 4, 1881.

Friend S., will you please describe those tin cans a little more definitely? Our boys have used something similar, but I believe they used thin parchment stretched over for bottoms of the cans, and tied the wire in the center of this parchment. Their principal trouble in keeping the machines in proper working trim, was the expansion and contraction of the wire, by changes of temperature.

COMB BETWEEN UPPER AND LOWER STORIES, ETC.

How to provide queens and Italian drones, and not lose strength in my stocks in the interim, is a problem, especially as some are in box hives and will require transferring. My Italian hive is from a dollar queen procured of you more than a year ago, and produced 60 lbs. of nice section-box honey last season. How shall I prevent the joining of broad section frames and brood frames below? In every instance they are joined by comb, and necessitates jarring to remove them. I see Kidder has tricked some of our N. C. neighbors, by the card of H. A. Davis in March GLEANINGS. They were here, and made the same pretensions, anxiously insisting on my influence to secure sale of State or county rights to another party. But I had read too much in the bee journals to engage in a swindle. I send you their card, and it would have done you good to see me showing the "Gen. Agt." some of my nice Simplicity hives and fixings. I prefer the Simplicity hives to any, because, in addition to the other advantage possessed by frame hives having no bottom (fixed), it enables us to hold a hand with the moth miller, and build to any capacity required. My nice well-filled 1-lb. sections are the admiration of all who have seen them. L. C. CANNON.

Spartanburg, S. C., March 9, 1881.

The attachment between the upper and lower frames is usually prevented by reducing the space to ¼ or ⅜ inch; but some stocks, during a heavy yield, will fill it up solid even then. Greasing the tops and bottom-bars of the frames will, if I am correct, stop it effectually. We are glad to hear you so pleasantly baffled the patent-right men.

WHERE THIEVES BREAK THROUGH AND STEAL.

I would have ordered you to continue GLEANINGS before now, but a thief broke in on me and robbed me of all the money I had on hand, some $200,00 more or less. I do not know how much I had on hand. This left me very destitute of change for some time. I trust as God saw fit to permit it, he will also see fit to assist me to provide, etc.

My bees seem to be opening out on the spring flowers splendidly. They are taking in the pollen from the early blooms. Every day the weather will permit, I find them on some of them. Like myself they are very low in funds. Whether the thieves "broke through and stole," or not, I can't tell, but I am trying to prevent any more stealing by feeding them in the open air every warm day. I am feeding sugar and water. They seem to take it up greedily, and I see no robbing now since I began to feed. I have lost six colonies out of forty, all on their summer stands. I am using the Simplicity hive. I have no company in the bee business within forty miles of me who use any other than the old-style hives, except a friend experimenting with a few Simplicity hives. D. L. MURFF.

West Station, Holmes Co , Miss , March 7, 1881.

No doubt God permitted the thief to steal your money, friend M.; but I am very sure it was not his wish that he should do so, and that one of the lessons he wishes you to learn from the transaction is, keep no such amount of money about you, where a thief might be tempted thereby. Whenever you have any such sum unemployed, put it in your bank, and give a check to whomsoever you wish to pay. If it is inconvenient to put it in a bank for any reason, put the greater part of it in an inside pocket, and handle it in such a way that no one shall know you have any such sum with you. Carelessness in handling both money and honey is often the means of making thieves of both men and bees.

OUR RED-CLOVER QUEEN.

The two queens we got of you last summer are all right, while the ones we got from Mr. —— and —— are all dead long ago. I believe the red-clover queen to be a very superior bee. I also believe that the most of cheap queens are worthless. If Red Clover gets through all right, I will raise our own queens. Our bees have been a dead expense so far. Will try again. MARY A. TERRIS.

Purdy, Barry Co., Mo., March 10, 1881.

Such has been the case in our own apiary, friend Mary, and as the red-clover queen is once more strong and all right, while many others are dead, we shall again raise queens from our red-clover queen, at least to a considerable extent. A little more charity, my friend. Low-priced queens, raised honestly, should be exactly like all others, only that they are not as yet tested.

A GOOD REPORT ALL AROUND.

About two years ago I bought a "sample hive" of Mrs. Lizzie E. Cotton, for which I paid $4.00. I thought this a high price for only a "sample" which I could not use. I saw in Feb. GLEANINGS an article, "Bee-Keeping for Profit, by Lizzie E. Cotton." I concluded to ask her to send me a copy gratis, because I thought she charged me too much for the sample; and, behold! the other day I received a copy free. I thank her for it.

I had ten colonies of bees last fall; wintered them out-doors. In Feb., two which I transferred last fall, swarmed out and united with the rest. One had brood in all stages. One of the eight, which I have yet, I bought in Nov. last for *thirty cents*. It was in an old store-box with broom-sticks for cross-bars, and had 6 lbs. of honey. I transferred it as soon as I got it home, and fed it sugar syrup and candy. It seems all right thus far. HENRY L. WEISS.

Spinnerstown, Bucks Co., Pa., March 14, 1881.

WINTERING WITHOUT PROTECTION, ETC.

I will try to tell you how my bees have done so far. I went into winter-quarters with 30 stands of bees—29 extra good, 1 not very good; sold 3 since, and the poor one died, so I wintered and have on hand 26 in as good condition as I ever saw bees at this time of year. The bees did not have a good fly from the 15th of Nov. until yesterday (March 10.) I fed rye meal yesterday; to-day is not warm enough to fly again. The most of my bees have chaff in upper story, but those that have no chaff are seemingly as good as those with chaff. I left all the 10 frames in, and those full of sealed honey. Some of the side combs are yet untouched, and strong with healthy bees. I had, for a wind-break, corn-fodder set on the north side of the hives of most of them. On one hive I left the section boxes on, and these were filled with honey, and some bees clustered on them, and yet wintered all right, while the thermometer near them stood, Dec. 29th, 17° below zero. I think I shall have plenty of bees to start in with the early bloom. I also think I can sell bees by the pound this spring, as it looks all right now. No Blasted Hopes for me. W. ST. MARTZ.

Moonshine, Clark Co., Ills., March 11, 1881.

POLLEN, AND ITS RELATION TO DYSENTERY.

Has not friend Merrybanks struck the keynote at last, in regard to the great bee malady, dysentery? I made the remark to a neighbor, but a short time ago, that if any one could find out the true cause of the disease, it would be worth a fortune; here is what I have observed this past winter. Last fall I put flour candy over several stocks of my bees; soon after, we had our first zero freeze, which lasted about 2 weeks, then one warm day that the bees could fly freely, and at once I noticed signs of dysentery. Some stocks spotted their hives with the well-known yellowish-brown color, and others with a white or milky color, which made me think then that the flour was giving dysentery; and I observed particularly that the flour seemed to pass them undigested, or apparently in grainy lumps.

Well, after reading the E. A. Robinson letter, I went out and examined a good stock that had died with two good frames of sealed stores, but had got clustered off away from them, in one corner of the hive and had starved, and they were bright and dry, and not the least spot or sign of dysentery about any part of the hive; and further examination showed but now and then a scattering cell with a little pollen in, perhaps a dozen in all, and nothing to indicate that they had eaten any pollen. They had no candy.

Question: Can any bee-keeper who reads this show that a single stock of bees have ever had dysentery when they have had no pollen at all? A. A. FRADENBURG.

Port Washington, Ohio, March 14, 1881.

GREEN CORN, AGAIN.

The only way we care to dry corn or eat it is to boil it first, then slice off outer ends of grains thinly, and scrape the rest so as to leave the hulls on the cobs; then spread on nice boards, tins, or plates, and dry in dry-house or stove, without scorching or souring it, and we consider it far superior to the old way, and a nice dish, and it requires but little cooking after it has been soaked soft. As none mentioned this way in your paper, I thought they had never had any. MARIA DEMING.

Watertown, Washington Co., O., Feb. 26, 1881.

OUT-DOOR AND CELLAR WINTERING.

Our bees did very well last season. We are wintering 35 swarms—20 in the house and 15 out-doors. Ten of those out-doors are packed in chaff, and 5 with boxes over them. They have been well covered with snow, and we do not see much difference in either way of wintering. They are all doing well. M. & W. OTTAWAY.

Volusia, Chautauqua Co., N. Y., Feb. 28, 1881.

WHAT AN A B C SCHOLAR HAS LEARNED BY EXPERIENCE.

I have just commenced bee-keeping, and I don't expect to make a failure. I have 3 Italian queens that I bought last year, and one I got from E. M. Hayhurst. She was out of the hive 36 hours, and it was 8 days before I could get her to lay, and then I had to give her a frame of eggs and larvæ, and had to build her up in the fall for winter. But her daughters are hard to beat. I was over them all, yesterday, and they had sealed brood in 4 or 5 combs, but she hadn't an egg. Would you breed from her or her daughter? She is very dark, and her daughter very light, and two spotted. Would you raise drones from the same queen this year that you did last, or would you change? I am going to work for honey till I get thoroughly Italianized, and then for queens and honey.

This has been a hard winter on bees. I think 50 per cent of bees in this part are dead. One neighbor has lost 13 out of 16. I have lost 25 per cent.

CAUTION ABOUT DIVIDING.

One thing I have learned, and it has cost me 80 lbs. of sugar and 4 stands of bees, and that is, not to divide too much. Will it improve Italians to cross them with Cyprian and Holy-Land bees?

BRINGING FROZEN BEES TO LIFE.

I found a colony of bees dead, and was anxious to see the queen; and while I was looking at her through my magnifying-glass, she came to life, and I fetched the bees in the house and warmed them up, and in half an hour I had a good swarm all right.

WM. MALONE.

Oakley, Lucas Co., Iowa, March 7, 1881.

I should not want to rear queens nor drones from any queen that was not a good layer; but so far as the latter are concerned, it is quite unlikely your young queens will meet any drones reared in your apiary. I should pay very little attention to the color of a queen, if I were rearing bees for honey. I can not tell whether the Cyprian and Holy-Land strain is going to be a benefit or not; but I am inclined to think they are. The present season will tell, doubtless. You are not the first one, friend M., who has brought a swarm to life, after they were apparently dead through cold and lack of stores.

BLUE THISTLE AGAIN; A CAUTION.

Being desirous of knowing more about the qualities of blue thistle (*Echium vulgare*), I sent a number of letters of inquiry to bee-keepers and others living in New York, Virginia, Georgia, and other States, and from their kind replies the following was gleaned:—

That beside "blue thistle" there are two other weeds growing in the U. S., belonging to the Composite family, which are sometimes called blue thistle; that the blue thistle that you sell is "the most enterprising" of the lot.

The most of the friends agree that, once in the ground, it is there for ever, and that all efforts to eradicate it will fail; that it spreads rapidly; that it injures oats, corn, wheat, hay, etc. But the greatest damage is done to pastures. Several writers agree that, if let alone, it will completely cover the ground and choke out all other vegetation except briers. This would be a very serious matter to us living in the North, who depend so largely upon producing cheese, beef, and wool. I believe the most of us bee-keepers would rather stick to our splendid yield of white-clover honey than have our pastures covered, or partially covered, with blue thistle, and allowing it to take the place of clover. They all agree that stock will not eat it.

But perhaps you will say, "Don't let it spread all over; keep it where you want it." Ah! that is where the rub comes, for birds carry it, and there are so many ways of scattering seeds, and then, once disseminated, will it not cost the people millions to keep it in subjection? A farmer living in Virginia writes: "Shun it as you would an approach to the 'deadly upas-tree;' it is the greatest nuisance we have to contend with." He sent me a package of it, which proved to be *Echium vulgare*. I may add, that some do not think blue thistle of much harm; but no one advises me to sow it, but, on the contrary, some say, "If you want a fertilizer, sow clover; for it can never give trouble." Permit me to say, in conclusion, that *E. vulgare* was brought from Europe, and is now a weed in fields, from New York to Virginia, and grows profusely in the South and West.

S. T. PETTIT.

Belmont, Ont., Canada, March 8, 1881.

OAK LEAVES AS A SUBSTITUTE FOR CHAFF.

I see and hear accounts all around the country of bees dying while there is plenty of honey in the hives. I have been in the habit, years past, of packing my hives in chaff; but in the spring the chaff was moldy and damp, and injured the hive as well as the bees, and had an unpleasant smell. This year (or last fall) I used dry oak leaves with old carpet or quilts laid over the brood nest. I examined them this spring, and find the leaves all dry, and the bees all in good condition. My experience proves that dry oak leaves are the best to pack in, as they will not mold or gather moisture, and will keep out the cold when packed close, and can always be found.

W. H. SHEDD.

Watseka, Iroquois Co., Ill., March 9, 1881.

Leaves have been frequently mentioned in these pages, but, friend S., I hardly see why oak leaves should be better than any other. We have had no damp or unpleasant-smelling chaff in our hives since we used the tin roofs.

THE FOSTER FOUNDATION MACHINE, ETC.

I got a fdn. machine, or mold, of Foster, of Mt. Vernon, Iowa, and I must say that it is a perfect success with me. No trouble, no slop, no waste, no washing off of soap suds, and no tedious picking off, bit by bit, of wax from the rollers, or imperfect sheets, as I went through last season with the Dunham machine. My Dunham cost me over $40.00 (with express charges), but to-day I would much prefer the Foster, if compelled to choose between the two. But we must have copper instead of plaster.

I have gone over my bees in the last few mild days, and cleaned up the hives, removing dead bees, etc.; rather awkward job with the chaff hive when the upper part is filled with loose chaff and planer shavings. I found all but one in good condition, with brood in all stages, but not in large amounts. Placed a frame of candy on top of frames of each one (though all had honey) to induce continued brood-rearing.

E. T. FLANAGAN.

Belleville, St. Clair Co., Ill., March 7, 1881.

HOLY-LAND BEES FOR WINTERING.

My experience in wintering Holy-Land bees has been different from yours. Mine have stood the winter much better than Italians or blacks. I have never had bees in better condition than the colony is that contains my imported Holy-Land queen. Perhaps one reason is, because they have been prepared for winter with more than ordinary care.

TENEMENT HIVES.

I got some 15 or 18 swarms of black bees late last fall, that were to be killed, and put them in chaff tenement hives. I put my black bees and some Italians in such hives; gave them 6 frames of honey each; put thick chaff cushions on top. Now, when I had them thus prepared I felt happy. I thought they would certainly stand the coldest winter; but now for the result: The bees prepared thus never clustered on a small place as sensible bees do; they kept up a continual roaring, commenced breeding in the winter, got the dysentery, flew out the coldest weather, and perished, and now are nearly all dead. The moth worm got in some of them and ate them up; others, where I have but four in one hive, are in good condition. Does not this go to show that bees can be kept too warm, even on their summer stands? I also wintered some in half chaff hives made with chaff only at end of hives. I put 2 colonies in each of those hives. The colonies prepared thus clustered against the division board, and outside combs got frosty, and some of the bees starved with plenty of honey in outside combs, and the most of those bees have dysentery, and are in bad condition. I. R. GOOD.

Nappanee, Ind., March 14, 1881.

We never think of wintering our bees anywhere else than on their summer stands. All have wintered safely. I have 26 stands, all in good order; we don't think of feeding; we leave them plenty of stores, so there is no occasion for feeding. Peach-trees are in bloom, bees bringing in pollen by the quantity. My colonies averaged about 25 lbs. to the colony, which I sold at 15c per lb. readily, while honey from the common hive (or gum, as called here) was dull at 10c. Bees won't notice buckwheat here; I have planted several times, but it is no use; the only thing I plant for bees is mustard. That blooms in the early spring from fall planting. It is just beginning to shoot now; in a week or two it will be in full bloom. T. L. DAVIDSON.

Early Branch, Hampton Co., S. C., Feb. 18, 1881.

CALIFORNIA, ETC.

I have received a number of letters lately, requesting me to give a description of California in regard to bee-keeping. Well, I don't think there is one-fifth part of this State that a man can make a living in by keeping bees. The good places are in patches, and the most of them, I think, are already overstocked now. I know that my section of the country, which is a small one, is good for bees on a space not to exceed fifteen miles square, but in the southern part of the State, I understand that bee-pasture is more regular in the mountains, but well stocked with bees.

We have a good prospect for a large honey harvest the coming season, because we have had plenty of rain the past three months. When we have plenty of rain in the winter we look for large yields of honey; and when we don't have plenty of rain in the winter, bees don't do much, for we don't look for any rain from the middle of April till about the middle of November. That would be quite a drought with you, I suppose. I am in an irrigated district, so I have a little the advantage of mountain apiaries in a dry year, as they call them here, when we don't get much rain in the winter. Well, I had 230 swarms of bees last fall, and have the same now; lost none, and they are getting plenty of pollen and some honey. Now I should like to hear how some of the bee-men succeed with *Lippia nodiflora*, our main dependence for good honey here.

HOW TO KEEP BEES FROM BUILDING TO THE CAP OR HIVE.

Can you tell me some cheap varnish, or something to put inside of super or cap to prevent the bees from sticking comb to it? I had considerable trouble with the bees sticking comb to the cap from the end sections.

HOW TO MEND RUBBER BOOTS.

Also can you tell your bee friends how to mend rubber goods after being cut or cracked? I once knew a shoemaker who could mend a rubber boot or shoe as good as new, and I would like to know how it is done. O. E. COON.

LeMoore, Tulare Co., Cal., Feb. 22, 1881.

I know of but one way, friend C., of keeping the bees from building combs where you do not wish any, and that I have given many times before; viz., greasing the wood with tallow.—Mending rubber boots may be thought pretty far away from the subject of bee culture, but as many of our friends wish to get out among their hives in this damp spring weather, it may not be out of place, after all. One of our boys, who is a shoemaker by trade, furnishes the following, which may be of service:—

CEMENT, FOR MENDING RUBBER BOOTS.

Take about 1 pint of benzine; put it in a bottle or can, then put a piece of pure rubber in with it, and let it dissolve. When dissolved, it should be as thick as syrup; if not, add a little more rubber; or if too thick, add a little more benzine. Put the cement on the patch, and also on the boot, and let it dry; then put another coat on each; let that dry, then put the patch on the cut. Before putting the cement on, take a rasp or file and make the place where you wish to put the patch quite rough. The rubber must be perfectly dry.

BEES ABSCONDING WITHOUT A QUEEN.

Why could you not just as well have said something about the singular circumstance of S. P. Yoder's bees [p. 132, March No.], absconding without a queen, and not returning to their hive, as the A B C class so invariably believe such is never done?

Nokomis, Ill., March 7, 1881. E. SANDFORD.

I beg pardon, friend S., for not considering the point you mention. It is, as you say, a very rare thing for a swarm to go off in that way, without a queen; but, although I have never seen them do so, I have pretty clear evidence that they sometimes do. As a usual thing, they go back to the parent hive, even after being hived; but sometimes it seems they do not. If there should be among the bees one who might act in the office of a fertile worker, they would likely stay, and perhaps this was the case with friend Yoder's bees. These cases are, however, so rare that I should never chase after a swarm if I had their queen in my possession.

DYING IN WINTER FOR WANT OF STORES.

Upon opening my hives this morning to learn how they had come through the "hard times" of this unprecedented winter, I found one colony dead under rather singular conditions. The combs were all bright and clean, and no signs of dysentery, and contained considerable sealed honey; but what puzzled me the most was the fact that the bottom of the hive was covered to the depth of half an inch with granules of white honey about the size of homœopathic pellets. These were not sticky at all, but dry and quite hard, as may be seen by the sample I send you.

I would like to have some of your readers explain the cause of honey being deposited in this strange place. I will add, that the colony was not fed in the fall, but had plenty of natural stores.

Chicopee, Mass., Mar. 16, 1881. **JOHN D. WHITE.**

I should say it was a clear case of dying for want of water, friend W., exactly as they do when they have nothing but grape sugar, hardened in their cells. The granules on the bottom of the hives were thrown down thus, because the bees unsealed cell after cell, and licked off the liquid portion, dropping the dry grains, and then perished. Their beautiful round shape is a peculiarity of certain kinds of honey in the candying process. I found some yesterday in our own apiary, that seemed to be mostly basswood honey. After uncapping the cells, it was found full of these miniature shot, as it were, with a small portion of liquid honey in the interstices. These pellets have much the taste of grape sugar, which they doubtless are in composition, although they were formed by the extremely cold weather of our past winter, from honey gathered from the flowers. If losses of this kind were very common, it would well behoove us to make some provision for giving bees water during the winter; but I believe they seldom suffer thus until they begin brood-rearing largely, and usually the condensation furnishes water enough, or more than enough. Furnishing water at the same time we give them candy, will greatly hasten brood-rearing, as has been abundantly shown in our back volumes.

INTRODUCING VIRGIN QUEENS.

My experience in introducing virgin queens differs from that of yourself and Mr. Lund, related on page 82 of Feb. GLEANINGS. I introduced seven last summer; five successfully; one of the two unsuccessful ones was given four days after the first swarm, and the other two or three days after. I simply put the young queen down at the entrance, and let her run in immediately after the first swarm issued, though in one case not till 24 hours after.

BEE-STINGS AND RHEUMATISM.

My mother had been unable to dress herself, sew, or lift a cup of tea with her right hand for over three years, from the effects of rheumatism. One morning she was helping among the bees, and received a slight sting on the left hand. In half an hour she was as sick a person as ever lived. Her whole body, from the top of her head to the end of her toes, appeared like one mass of stings. She recovered in about three hours, under the use of aconite and camphor, and could use her arm and hand as well as she ever could. **J. P. MILLS.**

Mills' Mills, N. Y., March 12, 1881.

FRIEND HAYHURST'S REPORT.

We went into winter-quarters with 93 colonies in our yard, all in first-class condition, excepting three; these had the indiscretion to make a raid on neighboring cider-mills, after they were fixed for winter, and were very much reduced thereby. We now have 90 first-class colonies, all breeding nicely. The three weak ones have brood in various stages, and, having excellent queens, I hope to make them valuable also. The bees have been working on Graham flour for several days. The past has been a most disastrous winter for bees in this locality, some apiaries being almost entirely depopulated.

E. M. HAYHURST.

Kansas City, Mo., March 17, 1881.

CHAFF PACKING, ETC.

My bees are all in good condition, with one exception, as far as I have examined. I put in winter-quarters, on their summer stands, 19 colonies, packed above and on two sides with old carpets and chaff. I found one queenless; the rest are brooding nicely. Bees in this locality made very little surplus honey; from 12 colonies I got only about 200 lbs. surplus, and increased, by artificial swarming, 5, and 2 naturally. I have 3 colonies in the Quinby, 2 in Langstroth, and the remainder in the Mitchell hives. I get the best results from the Quinby, but it is too expensive for profit. The Mitchell has not sufficient space above the brood-chamber for surplus arrangements; I intend to convert them into L. or Simplicities. **F. S. MOSSTELLER.**

Sharonville, O., March 21, 1881.

Reports Encouraging.

ENCOURAGING.

FRIEND ROOT: — You may put me in the Smilery or wherever you please, so you do not put me in bad company. The goods I ordered came all right, with the exception of the needles, which followed suit through the mail. But while I was pleased with the goods, this was not all that tickled me. This day, Feb. 25th, was mild, and I examined all my colonies at home, and found them in excellent condition. The whole 24 bid fair for not only weathering the storms of winter, but for being in good condition to send forth their legions to sip the nectar of the flowers — the fabled "food of the gods." If the season proves a good one, I may have honey to sell and some to eat. In view of the terrible ravages our severe winter has made in my neighbors' bees, I feel grateful to be so fortunate as I am. In the language of Shakespeare, I feel—

"My nature tickled with good success."

But in this, as in other things, I am reminded to "rejoice with trembling." There are yet dangers to be avoided, and casualties may occur, that might blast our anticipations. In the language of the Scottish bard, addressed to a mouse whose nest he had turned up with the plow,—

"But, Mousie, thou art no thy lane,
In proving foresight may be vain;
The best-laid schemes o' mice an' men
Gang aft a-glee,
And lea'e us naught but grief and pain
For promised joy "

Whether successful or not, if spared I will report in due time. I know of but few stands left in all this section. Some have lost from twenty to thirty stands. **WM. BALLANTINE.**

Sago, Muskingum Co., Ohio.

Bees all right; came through the winter splendidly. Wintered on summer stands. Think I never had them do better. But the fretful month of March is just before us. **J. W. JOHNSON.**

Shelbyville, Shelby Co., Ill., Feb. 25, 1881.

FRIEND ROOP'S WINTER-PROTECTOR BEE-HIVE.

I have read GLEANINGS with interest during the year past, especially the experiences of the various members of the A B C class. I have never publicly announced myself a member of that class, although I became one last May. I then bought 2 colonies of Hiram Roop, Carson City, Mich., in his "Winter-Protector" hive. I brought them home all right; doubled them during the season; took from them 100 lbs. extracted honey, 35 lbs. crate honey, and kept a plenty for bees during winter. I was sick from Sept. 16th till Dec. 6, and bees received very little care during that time. I filled side and rear chambers full of good dry sawdust about Christmas, and left them, I feared, with not enough honey. During my sickness, one colony became queenless and remained so for some time, owing to a failure to rear a queen, and my losing the one I bought of you, by the cold.

The winter has been very cold, and constantly so—only three warm spells. To-day, with some misgivings I opened the hives. Result, as follows: Three hives with brood in each. Bees on all the frames. Dead bees on each bottom-board, which I cleaned off. As many live bees now in each hive as any time last fall. The fourth colony is the one mentioned as queenless, but will live through, I think, without trouble if the next 60 days are not too hard on them. I gave each colony more honey, and kept some for April and May. My account with apiary is as follows:—

2 colonies at $10.00 each (minus hives)..........		$20.00
Cr. by 4 colonies (Dec. 31, 1881), at $8.00 each..................................	$32.00	
By 100 lbs. extracted honey, sold at 12½c..	12.50	
By 35 lbs. crate honey, sold at 20c.........	7.00	
Total..................................	$51.50	
Deduct cost of bees..............................		$20.00
Balance.....................		$31.50

Now, isn't 150 per cent on cash outlay a pretty good investment?

If bees are all right next May I shall feel much encouraged, and shall try Roop's hives another year.

McBrides, Mich., Mar. 7, 1881. F. A. PALMER.

My bees are in fine condition, storing both honey and pollen from peach, plum, and wild prairie flowers. All wintered finely in Simplicity hives on summer stands without protection, and this is the severest winter in Texas for 30 years. The Italians you sent me last year are ahead too plain to question. I will Italianize this season. DR. J. E. LAY.

Hallettsville, Texas, Feb. 28, 1881.

Bees are all right yet; they all had a good flight yesterday. Last season was one of the best seasons that we have had for five years—one continual flow of honey from the first of June till the 20th of October; first, white clover; then smartweed the remainder of the season. AARON DEARDORFF.

Palmer, Christian Co., Ill., Feb. 28, 1881.

I cut fdn. in small strips, and don't care if they don't reach across the frame. My bees are all alive but one hive. I received 40 lbs. of honey to each hive last year, and an increase of two hives to each old one. STEWARD FRANCIS.

Dunbar Station, Neb., March 8, 1881.

I was very much afraid I should have to go into Blasted Hopes, but matters have turned out a good deal better than I expected. Some time in January I noticed my bees getting restless, and were bound to come out, and I lost a great many in that way; but when I got the March GLEANINGS I found out it was dysentery; and now we have had a few fine days, though we have yet a foot of snow. They have had a good fly, and I made some candy out of coffee A sugar, and gave it to them, and they seem all right now. I could not get the candy to suit me, but did the best I could, though I could not get it to break off my finger like an egg-shell. I went into winter-quarters with 19, and came out with the same, but some were greatly depopulated, and some were first class. THOMAS PURDY.

Westover, Ont., Can., March 10, 1881.

Notes and Queries.

I HAVE now in my house apiary 82, which seem all right; had 104 last fall; have about 16 in apiary 2 miles out; expect to lose some yet; nearly all the small colonies, and those in the old box hives have died, and some in my double chaff hives; but I think these were disturbed, and made restless and uneasy by the mice when the weather was cold. N. N. SHEPARD.

Cochranton, Pa., March 16, 1881.

THE STINGLESS BEES OF SOUTH AMERICA.

[Our friends will remember that we said we had written to one of our South American subscribers in regard to the matter. Here is his acknowledgment of the receipt of our letter]:—

I received your letter and prospectus for Dec. 8th, 1880. I shall send you letter and orders next, and hope to be able to give you some information about the bees in question. I wrote to Paraguay for it, and offered good prices for hives with native bees. To introduce queens to black bees or Italians seems to me a funny idea. Mr. Nolse is book-handler. I receive the GLEANINGS by him. Your subscriber and obedient servant is J. NOELTING.

312 Calle Cangall, Buenos Ayres, S. A., Feb. 14, 1881.

BLACKS AND HYBRIDS WANTED.

Will you have any black or hybrid queens for sale this spring? My bees are nearly all *gone*, and I have lots of nice frames of comb, and would like to stock them up, but can't buy bees here for any reasonable price, as but few are left, and those are very weak.

D. W. FLETCHER.

Lansingville, N. Y., March 21, 1881.

[We have no blacks nor hybrids, and it would hardly pay us to buy them to send out again. Will those who have such make it known? We will advertise them without charge, for the present, for accommodation. Take care of your combs, friend F., and you will find use for them all.]

My bees have wintered finely, and without loss, in my new chaff hive. The contrast between them and my former single-walled hive is very marked in the matter of wintering, and I am more and more convinced that chaff hives are *the* hives. I make all my own hives now. P. R. RUSSELL, JR.

Lynn, Mass., March 6, 1881.

Bees are wintering very well so far in the cellar. They had a good fly the 8th of this month. Those left on the summer stands with no protection have died rapidly. One bee-keeper reports, "Out of 140, I can not save 10." C. M. CRANDALL.

Independence, Mo., Feb. 17, 1881.

Bees are wintering well so far with me, but it is not quite time for the pull yet. G. M. DOOLITTLE.

Borodino, N. Y., Mar. 7, 1881.

FIRST RECORD OF NEW HONEY.

I began extracting yesterday! Willows have been in bloom two weeks—maple also.

Raceland, La., Feb. 15, 1881. CHAS. S. LARKIN.

I have 225 colonies of Italian bees.

T. J. MARTIN.

Rocky Mount, Bossier Par., La., Feb. 7, 1881.

[A very goodly number, friend M.; but can't you tell us a little more about them?]

CALIFORNIA.

At present the outlook for a good honey crop in Southern California is not brilliant. Rain has been driven away several times by north winds.

Los Angeles, Cal., Mar. 6, 1881. J. MADORY.

I feel thankful that my loss has been so light. Out of 184 swarms at the close of the honey season last fall, I have at present 156; but the severe test is yet to come during this month. N. E. PRENTICE.

Castalia, Erie Co., O., March, 1881.

I winter in chaff hives. Out of 75 put up one swarm had starved, and one was nearly gone—with old age I think. Several had become very uneasy, and were much reduced. All that I examined had more or less soiled spots in their hives, but were usually strong. S. C. PERRY.

Portland, Ionia Co., Mich., Mar. 6, 1881.

IMPROVEMENT ON CLARK'S NAIL-BOX.

Suppose, instead of a label on nail-box (p. 122) you put a loop to hold a sample nail. This will show at a glance what is within. One-fifth of bees on summer stands are dead. J. E. DEAN.

Fishkill, N. Y., Mar. 9, 1881.

[Very good, friend D., and many thanks for the idea.]

Bees are wintering in very poor condition in this section. Nearly all the bees will perish where they are kept out-doors. We have ours in cellar, and will have no loss to speak of; they seem to be in as good order as when put in on the first days of November. The prospects are good for a good honey season; that is, if the people have any bees to gather it.

Camargo, Ill., Feb. 14, 1881. J. V. CALDWELL.

A LONG WINTER.

Quite a number of bee-men in this county have lost every colony they had. I think my loss will not exceed 8 per cent. I have examined a number; find eggs and sealed brood in strongest colonies. Bees had a good fly the 5th of Nov., and then on the 30th of Jan.—the longest cold weather ever known in southern Ohio. I had one ton of surplus honey last summer. J. B. RAPP.

Owensville, Ohio, Feb. 25, 1881.

ANOTHER OFFER OF DRIED CORN.

Having noticed in GLEANINGS that you want to know what you could get dried sweet corn at, we can furnish it to you for 7c per lb., not including freight. We dry large quantities every season—a hundred barrels or more, and have had no trouble to sell at that price. We can send you sample next fall, when we get to drying. We do not want to tell you what bad luck we have this winter, as you would class us in Blasted Hopes. E. SHERMAN.

Preston, Hamilton Co., Ohio, March 7, 1881.

SMOKER COLUMN.

NOW, friend R., I am one of those users of the vile weed put up in the shape of smoking tobacco. I thought of breaking the habit last summer; but it was so handy to smoke the bees with that I did not know whether you would send me one of your large size cold-blast Simplicity smokers. I *will* quit smoking. I have been a smoker for ten years, and during that time I think I have looked a good deal more like a *simplicity smoker* than yours does; or, it may be a *simpleton smoker*.

Horton, Mich., Mar. 3, 1881. C. E. LARRABEE.

You offer a smoker to all your subscribers who will quit the use of tobacco. I have used the weed for 12 years. You send me one, and the day of its arrival I will quit, God being my helper. Send Bingham's cold-blast, large size. I am afraid your offer will cost you more than you expect.

Bees are almost all dead here; they were killed by fruit and carelessness. Some left their bees as they stood on the summer stands. ARRISTA BAILEY.

Bedford, Ind., Mar. 5, 1881.

LATER:—The smoker came to hand all right, and I will honor the pledge I have taken.

If my offer of smokers will be of lasting benefit to those who give up the tobacco, friend B., though it should be a temporary loss to me in the start, it will be a gain to others in the end, and God will, in some way, see that I am no great loser. Very simple means, in God's hands, often bring about great good. Let none of us be weary in well doing. Perhaps it may help you some to know that our friend "D." is at this moment undergoing the ordeal. Although it comes hard, he is going to pull through, for he "is on the Lord's side."

You will see that I have sent for a smoker without sending pay for it. If I am not entitled, I want you to send it just the same, and I will send the pay for it. If I am right, you offered a smoker to those that were tobacco-smokers if they would leave off the filthy habit. Well, I commenced smoking when I was 19; am now 57; have always been a hard smoker. I made up my mind to quit, the Lord being my helper. Well, I prayed earnestly that he would help me in his own way. I felt that in my own strength I could do nothing. Well, before the day came I had set to quit, my appetite for it was gone, and now I am as much disgusted with it as can be. Bless the Lord for it! CHAS. E. LARABEE.

West Chazy, Clinton Co., N. Y.

Please send me one of Bingham's Standard smokers, for I have quit using the *weed;* have not used any since I saw your offer in Oct. GLEANINGS. I have used it for over 15 years. If you send me a smoker, and I ever use tobacco again, I will send you a $5.00 greenback to pay for it. My wife is looking over my shoulder as I write this, and she says she will write to you and let you know if I use the nasty, filthy weed again.

Ten per cent will, I think, cover the loss on bees in northern Michigan. J. A. COLLIER.

Hart, Oceana Co., Mich., March 8, 1881.

Many thanks for the smoker. It is just splendid. It came on double-quick time. The boys are watching me very closely; but let them watch; and with God's help I will stick to my pledge.

Colby, Mich., March 10, 1881. W. R. TRUSSEL.

Our Homes.

Choose you this day whom ye will serve.
—JOSH. 24:15.

MY friends, the subject I would consider to-day is, whether any one can be a Christian who chooses; or, if you please, can any one be a happy and joyous Christian? In other words, can any one of you at any time step out of your despondencies and discouragements, and be happy, or, at least, peaceful, right off, at once? The objections that will be raised are, that it would be literally bringing heaven upon earth, almost; and inasmuch as this is a world of sin and sorrow, it can't be done; it is impossible. If I read my Bible aright, God did intend we should have a heaven here on earth, if we would accept it; but if we will not take it as a free gift, of course we do not have it. I know this is talk, but so is bee culture talk; and if you did not verify it by practical work, it would end in talk; but if you try what you see recommended by the different friends, and it proves right and good, the result is something more than talk. I want you to try what I say, and see if it does not prove good.

If I am correct, the difficulties that lie in our way in choosing a Christian life, or a happy life, are much like the difficulties that lie in the way of getting up in the morning. Suppose we have decided in our own minds that it is best for our health, best for our work, and best for us in every way, to go to bed at 9 o'clock, or earlier, and get up at 6 o'clock, or earlier. You have over and over decided upon this course as the best; but when 9 o'clock at night comes, there is, as usual, so much on hand that you put it off and put it off, until it is 10, and perhaps even 11, and finally you have only the old story over again, of being late in getting up, late at breakfast, late at work, and very likely are made unhappy all the forenoon, and possibly all day, just on account of this lazy, shiftless fashion you have got into, and have given way to, day after day. Joshua said to the people, "Choose you this day whom ye will serve." You have chosen lazy inclinations, or at least you have chosen to disobey your good sense and judgment and wisdom. Suppose you should say you did not choose it; you chose the better way—but what? Dare you tell me you could not help it? Do you not mean you *would* not help it? Did Joshua mean the people were to choose God on that day, and then go and serve idols? Perhaps you will say that you have tried going to bed at 9 o'clock, but it wasn't any use, for you just lay awake an hour or more, while you might have been doing important work. Well, my friend, if this is the case you are ready to get right down to work; but you want to first learn that your feelings and your inclinations are one thing, and your calm and deliberate reason another. Inclinations will continually clamor for the old order of things, or a worse one, if you give way to them, while calm reason says it won't do, and has got to be stopped. Reason,—or, if you choose, *you, yourself*,—the choosing, or deciding power that lies in you, must assert its prerogative as ruler, or "boss of proceedings," and must take charge of the body and inclinations. The intelligent part of you that reaches up to God, and that prevents you from being only an animal, must step forth and take things in hand, something like this:—

"Look here, old fellow, you have got to straighten up. I will put you to bed, and there you are to lie; and if you choose to lie awake, do so; but remember, you are to be up with the light, sleep or no sleep; and if you lack sleep, you must learn to take it at the appointed hour. I am boss of this business, and know best, and you will certainly soon learn to be as ready to sleep at 9 as you now are at 11. God made the daylight and sunshine on purpose for such bodies as you; and, besides being healthier, it is far cheaper. In bed you shall go, and there you shall lie during the hours that I, your lord and master, have calmly and deliberately decreed are for your best and greatest good."

Is that a new doctrine? "He that ruleth his spirit is greater than he that taketh a city." How would it answer, my friends, if you should take exactly that course in regard to all your habits, in eating, drinking, bathing, exercise, etc., as well as sleeping? Have you any doubt of what the result would be? Well, to go a little further, you may say that one day this higher self decides one way, and another day in a different manner. I have before spoken of this, but I think it is mostly a mistake. You may be, for a day or more, biased in your reason by a feeling of spite against some one; but at such times you are to wait. Remember, feelings (especially personal feelings) are not "the boss;" they are only servants. Your cool, calmer, and better self tells plainly which course is best, in almost all matters of life. Especially is this the case with the heart that goes often to God in prayer, and therefore seeks the highest good of all mankind, rather than a solely selfish good. When this purer part of us comes out, this God part, as it were, and stands free and clear from selfish feelings and passions, all mankind think pretty nearly alike. In questions as to what is really best for community, not only do all Christians pretty nearly agree, but so, also, do unbelievers, and people of every class, when you can get them to be really honest. Even the criminals in our prisons have good judgment, and a clear understanding, on most important questions. Although there are thousands who do not pay their debts, I have never seen a man yet who, when shown a promise of his, in his own handwriting, would ever argue that he ought not to keep that promise. All mankind have a respect for consistency; all love truth. Every one of you, my friends, could write down a few great principles for ruling your conduct in life, and you would, if you took a look at them in your calm moments, subscribe to them every day in life. Not only this, your friends and neighbors would subscribe to them also. Let us see how this little text will work:—

"Do justly, love mercy, and walk humbly before God."

You all agree to the first, I am sure. There is not one among you all who would think of disputing the wisdom of such advice, even if he were not in his calmest moments. Have I put it too strongly? Well, how about mercy? I am sure you would all say the same in regard to this, if the mercy were to be shown you, after you had transgressed in some way. Well, just apply the first a little to it, and we shall probably all agree in all of it, pretty nearly. In regard to walking humbly before God, I presume that in this, too, almost everybody will think it at least a very good idea for their neighbors so to do; and so applying the first, we all come round to about the same point.

Well, if all mankind believe about the same thing in regard to all the great essentials, why is there so much trouble and misunderstanding, to say nothing about the *crime* in the world? The men who came to steal friend Baird's turkeys [see p. 97, Feb. No.], very likely believed just about the same as our friend did who was calling to them out of the window. Suppose these men could have been quietly captured in the act, and brought into the house; what would they have had to say in extenuation of their course? Would they have said that, as they understood it, it was right, and fair for them to go in the night and take the turkeys friend B. had raised with care and trouble? Would they have been likely to have pleaded ignorance of the laws of man or God? Not at all, for we all know what is right and just, alas! but too well. Their trouble and your discontent, my friend, is from the same common cause; we know what is right, but we do not follow after that knowledge. It is not lack of wisdom; it is only because we choose evil rather than good.

Now, holding the points that have been made, let us take up another, that I have talked of to you before, many times. Suppose you have an alarm clock, to waken you in the morning; but because you don't feel like it, you pay no regard to its faithful summons. You all know that you very soon get into a habit of not hearing it at all. If any of these calls to duty are disregarded, we soon cease to heed them. Well, now, there is a queer element in sin that makes him who sins bitter and uncharitable toward those who obey, or are striving to obey. If you have a neighbor who gets up early, and you don't, you are almost sure to think he has some purpose in so doing that is not a good one. If you have yielded to your feelings in doing that which is wrong, and your neighbor is striving and praying for a pure heart, nine times out of ten you will call him a hypocrite, and take pleasure in railing about hypocrites as a class. Who has not heard bad men talk about the corruption of our ministers, condemning them as a class? I have told you something of how my class of saloon-keepers in the jail talked. They fairly got up on their feet, and gesticulated in the vehemence of their denunciations, and yet none of the clergy had been in any way instrumental in causing their imprisonment. I have heard that animals with the hydrophobia become mad at the sight of water, and hence the name, signifying "water-madness." Well, one who has chosen Satan for his father; one who is deliberately committing voluntary sin day after day, is crazed, almost at the sight of a Bible, or at the mention of ministers, or any other servants of Christ our Savior. Lost women often show this in a remarkable degree. They would burn every Bible in the land if it were in their power. This attitude of heart is, of course, while they have chosen evil, and have most emphatically rejected, and are at enmity with, the spirit of Christ's teachings. Even their actions seem to say,—

> What have we to do with thee, Jesus, thou Son of God? art thou come hither to torment us before the time?—MATT. 8:29.

Well, is it possible for such ones, steeped in sin, to accept Christ, even if they wished? Can one who is in the bonds of Satan believe in Christ or the Bible if he tries so to do? You see, of course, he can not, and hold to his sinful life or ways. The only thing to be done is to be remodeled, made over new, or, as Jesus terms it, "Ye must be born again." "But I do not believe in the Bible," says the poor crime-stained brother or sister; "I have tried to believe, but I can not." I am sure, my friends, the point is clear before you. The talk about belief is simple folly and hollow mockery. There is no need of wasting time and talk about what you believe, or what you do not; the great important point is, *to obey*. As long as the individual does not obey, and does not propose to, we can not expect him to profess any honest belief. Do you see how beautifully Christ's words come in here?—

> If any man will do his will, he shall know of the doctrine, whether it be of God, or whether I speak of myself.—JOHN 7:17.

Note also what Paul says,—

> For the preaching of the cross is to them that perish, foolishness; but unto us which are saved, it is the power of God.—COR. 1:18.

Do you not see that, at least to a certain extent, even our beliefs are subject to our control and our will power? In your calmer and better moments, you decided it was best for you to get up earlier in the morning, and in spite of the clamoring of inclinations, you literally put yourself to bed, and took yourself up. You put your weak and tired body to bed, because it was the best and safest place for it. Instead of serving wrong and weak inclinations, you, like a wise and good ruler, chose wisely for your weak body.

Now, our text says, "Choose you this day whom ye will serve." It does not say any thing about beliefs. You decided about your earthly body, and for its best welfare and safety. Have you yet decided in the same way for your immortal soul? Where will you put yourself when you lie down for that last sleep? Whom are you going to serve? Take the New Testament and read Christ's sermon on the mount. Read his sayings and teachings all through. As you read, ask yourself how it would probably answer,—what would be the effect on your life,—if you should decide to serve him; or, if you choose, to lay out your life in accordance with his teachings? No matter about beliefs now; just candidly sum up what the result would be to make such a life your choice. Doubtless a great deal of it looks strange and perplexing; but is it not probable that much will be developed and unfolded as you look into it, that is not apparent now? Does it not begin to look safe, secure, plain, and restful, as you go into the subject further? What harm can possibly come from taking up such a humble, quiet, peaceful life as is here spread forth?—

> Take my yoke upon you, and learn of me; for I am meek and lowly of heart: and ye shall find peace unto your souls. For my yoke is easy, and my burden is light.—MATT. 11:29, 30.

Suppose you should choose it, and live it, and as you come down to death it should transpire that the Bible is a mistake, and that skepticism and infidelity are right, would you, on your dying bed, think you, have any thing to lament? I am appealing now to this higher and purer intellect that God has given us all. Answer me soberly and candidly, or, better still, answer the God who made you. What answer would the highest wisdom known to mankind indicate? Where is the safest place to live and to die,—following Jesus and the Bible, or the world and skepticism? "Very well," some may say, "I am ready to accept the New Testament; but what about the Old?" My friend, your house is on fire, and the thing to do now is to go for water, wherever you can get it. After we have put the fire out, and the smoke has cleared away, we will have time and a clear vision; but for the present, trust Jesus. He says, over and over, the Old Testament is all right, and we are just going to put it all on to his shoulders. If any trouble comes in here, at the bar of judgment, we will throw all the blame upon him, God's only Son. Nothing pleases God more than to have us show him we have accepted his Son's words, and are determined to follow and hold fast to him, through all sorts of trials, and under all circumstances. Remember, if you reject the Bible you have nothing. All the philosophy that was ever invented since man has been upon the earth gives no comfort, offers no savior, no help in trouble, and no peace on a dying bed. Listen to the words of that beautiful hymn from the immortal Charles Wesley:—

> Other refuge have I none,
>   Hangs my helpless soul on thee:
> Leave, oh, leave me not alone,
>   Still support and comfort me.
> All my trust on thee is stayed,
>   All my help from thee I bring;
> Cover my defenseless head
>   With the shadow of thy wing.

You have looked the matter over calmly and quietly, with honesty and candor before God, contrasted a life guided by a pure and simple trust in Christ with one without any such faith, and have longed, hungered, and thirsted after righteousness. You have not only said I wish I were a Christian, but you have gone a little further, and said I want to be a Christian. Doubts, difficulties, and, worst of all, inclinations, rise up and clamor and object; but the soul that God gave you, that part of you which he created in his own image, rises up in supremacy, and asserts its privilege of saying, just as it did when putting the tired body to bed, "Child of weakness, ignorance, and sin, I, the responsible part of this temple of clay, after having carefully and deliberately canvassed all points in regard to your best and greatest happiness, do unhesitatingly decide, that you are to be subject to the rule of Christ as your Lord and Savior; and I do hereby give warning to all feelings and emotions, all doubts, and fits of discouragement, that you are from henceforth to be the servants, and Christ Jesus your Lord and Master. In this little temple, of which God in infinite love and mercy has chosen me to be the head, there are to be no rebellious thoughts toward him tolerated, and I do hereby this day set my name and seal that, henceforth and for ever, so far as lies in my power, this whole life shall be put on the Lord's side. Will appetite, temper, uncharitableness, doubts and unbeliefs, discouragements, stubbornness, and all other feelings that may be apt to rebel, please take notice?"

Now, inasmuch as beliefs are greatly the effect of the lives we have led, as we have seen before, will it do any harm if the individual, or any individual, makes a *choice* of a Christian life, as given above, no matter what he believes, or thinks he believes? Suppose one whose stumbling-block in the way of becoming a Christian is unbelief, chooses as above, will God accept such a one? Can any one have faith in God who wishes he had it? My answer would be, most emphatically, yes. It may not come just at the minute; but put yourself right over on the Lord's side, with an earnest determination to stay there, no matter what comes, and the faith will be on hand, against any emergency.

> Whoso cometh to me I will in no wise cast out.—JOHN 6:37.
>
> Choose you this day whom ye will serve * * * * * * But as for me and my house, we will serve the Lord.—JOSH. 24:15.

'Tis Saturday night. The rooms of the factory are now all deserted, and "M.," "D.," and myself are sitting alone at the table. The work of the week is over, and both young men are in their Sunday attire, looking clean, pure, and happy. I have just been reading from my well-worn Bible,—

> Whosoever will be great among you, let him be your minister; and whosoever will be chief among you, let him be your servant.—MATT. 20:26, 27.

I will tell you why we are here. On the day before D. came out of jail, as we knelt on the stone floor for the last time, I remarked, "D., we are now going to kneel together for the last time," meaning the last time while he was a prisoner under the law; but I carelessly omitted to put in the words, "here, under these circumstances." He looked at me, and I caught his bright dark eye as he said,—

"It may be for the last time *here;* but, Mr. Root, I hope it shall not be the last time that you and I shall kneel together in prayer, by any means."

I hastened to apologize, but the words have followed me. M. too had said several times that he missed the long talks we used to have together, and so I suggested that we should have every Saturday night for a sort of anniversary of old times, and for a little prayer-meeting of our own. Now, was there not rare wisdom in the suggestions from both these boys? Are we not in danger of forgetting that when one comes out, or even joins the church, he is only just *started* on the right track? Do you remember what Jesus said, in almost his last words, to the wayward Peter?—

> So when they had dined, Jesus saith to Simon Peter, Simon, son of Jonas, lovest thou me more than these? He saith unto him, Yea, Lord; thou knowest that I love thee. He saith unto him, Feed my lambs.—JOHN 21:15.

Now, my friends, I need not ask of you whether you think it will be a good thing for all three of us to meet thus together in prayer (of course, all others are welcome to come who choose), for the finger of God is so plainly stamped on it that no one could hardly err therein; but the point I wish to make is this: the new lives of these two,—yes, of all three of us,—is simply the effect of—

> Choose you this day whom ye will serve.

If we remember the choice we have made, and hold to it, God only knows what may be the ending of just these three lives. Sunday evening, at our usual evening prayer-meeting, I was looking round a little uneasily, because I did not see "D." in his accustomed place. A few minutes more, and in he came with one of his old associates, whom I should not be surprised to hear had never been in such a meeting before. "May God bless the boy!" I mentally ejaculated; and methinks I hear a prayer of similar import breathed from many a heart away along the line of my readers. Is it so? And are there not more who will say to-day, and say it again at the first opportunity, before your pastor and friends,—"As for me and my house, we will serve the Lord"?

It really seems as if God prompted my good friend Rumford to send the following lines to close up what I have been saying. Read them, and see what you think about it, dear reader:—

UNDER HIS EYE.

When you think, when you speak, when you read, when you write,
When you sing, when you walk, when you seek for delight,
To be kept from all evil at home and abroad,
Live always as under the eye of the Lord.

Whatever you think, both in joy and in woe,
Think nothing you would not like Jesus to know;
Whatever you say in a whisper or clear,
Say nothing you would not like Jesus to hear.

Whatever you read, though the page may allure,
Read nothing unless you are perfectly sure
Consternation would not be seen in your look
If God should say suddenly, "Show me that book."

Whatever you write with haste or with heed,
Write nothing you would not like Jesus to read;
Whatever you sing in the midst of your glees,
Sing nothing that God's listening ear would displease.

Wherever you go, never go where you fear
To answer if God asks, "Why are you here?"
Whatever the pastime in which you engage,
For the cheering of youth, or the solace of age,
Turn away from each pleasure you'd shrink from pursuing,
Were God to look down and say, "What are you doing?"

Dear Friend:—I find the above in the *Christian Advocate*, and thinking it would be so well if we could all act it out, I believe it would be of much use to set friends thinking, if you could find a corner in Our Homes for it. I. R. RUMFORD.

Bakersfield, Cal., March, 1881.

ALL YE THAT LABOR, AND ARE HEAVY LADEN.

I have a nice, almost a luxuriant, village home, but yet I am so awful discontented that life is a burden. I am not ignorant of the kind of medicine you would prescribe—but—well, I have an extravagant wife and family (especially the daughters.) Without egotism, I can say that I am pleasant and good-tempered. My greatest, anxious concern is, because my family are so thoroughly absorbed in the pleasures of this world. I dread the future, for I would be a Christian but—but I am not. X. Y. Z.

One is tempted, at first thought, to be almost indignant at a man who can write as has this brother; and yet, when we reflect that, although we are not tempted by Satan (and our lives made unhappy), in just the way he is, there are a great many who are discontented and unthankful, even when surrounded and blessed by all that should make one's life happy. Shall we not rather weep at the weakness of our fellows, than to censure? Friend Z., your wife and daughters may be somewhat at fault; but by far a greater fault rests on your own shoulders, and in fact the greater part of *their* fault rests on you. You once had a faculty of winning your wife, or she would not be your wife now. Am I not correct? Again, the very fact of a man's being the father of grown-up sons and daughters should, in itself, be to him an unending thrill of joy. They are alive and well; can you not thank God for that? You can win those daughters over to your way of thinking, if you are only half in the right, just as surely as you won their mother in her youth. Would you listen to a human being on the face of the earth who would speak unkind and uncharitable things of them? and yet you have listened to the prince of darkness.

You say your greatest concern is for them, friend Z. Let your greatest concern be for yourself; go down on your knees and say, "God have mercy on *me* a sinner;" get these thoughts out of your head and heart, as if it were a hideous leprosy, which it really is, and then can you say, as did David,—

> Then will I teach transgressors thy ways; and sinners shall be converted unto thee.—Ps. 51:13.

No wonder you are unhappy, my brother, for so is every one who listens to the whisperings of Satan. Very likely you are right, in the main, and your wife and children wrong; but for all that, you are in the main at fault. You are at fault, in that there has not been a loving confidence and trust between yourself and every member of your family. One who can not agree with his own flesh and blood can rarely agree with himself, and hence the discord and discontent. But how about the present? What shall all those do who find themselves unhappy and discontented, from other or like causes? I can not tell just what is best and wisest for friend Z. to do; but God can, and will. Put the case entirely in his hands; plead with him and pray for those who are going wrong, and there is no such thing as fail. Of course, one who puts his trust in God does nothing under the impulse of the moment, but is guided solely by the result of the calm and deliberate decisions of his better moments. There are moments of cool, calm, deliberate wisdom, in the life of almost every one—moments when, unstirred by passion, prejudice, or selfishness, his judgments are wise and just. Sometimes the individual can not exercise this where he himself is a party, but only in a case where he has no interest. Even thieves and robbers have this sense of fitness and justice, as I have explained. It is this divine part of humanity, or God part, that must rule. It can only be done by committing one's whole life to God's care, and going to him faithfully and almost constantly in prayer. It is not so much because we lack wisdom, but because we will not use that wisdom, or that we will not let it come uppermost. We choose rather to listen to, and cherish, the more agreeable whisperings of Satan, in just the way our poor brother has done. Will it pay? If friend Z. will take God into his confidence, and with a strong hand root out these wrong feelings, he will in a little time find the love and friendship of these of whom he has spoken, the most precious and joyous experience he has ever known upon earth; and instead of having discontented thoughts, his heart will be continually breaking forth in thanksgiving and praise.

Eye hath not seen, nor ear heard, neither have entered into the heart of man, the things which God hath prepared for those that love him.—I. COR. 2:9.

Those of you who have read Part First of Our Homes will remember that I know something of what I am speaking. You will observe that friend Z. stops abruptly without giving any reason why he is not a Christian. My friends, there is no reason to give; none in his case; none in yours, none in that of a single individual on the face of the earth. It is, over and over again, simply—

Choose you this day whom ye will serve.

On page 289, of June No. for last year, was a letter from a minister who had become involved in debt, as some of you may remember. I presume you also reccollect the advice I gave him, for there has been some inquiry as to how he turned out. I think the following letter may interest you. You will observe I am in the habit of using "X. Y. Z." as a sort of general signature in many of these matters, simply for convenience' sake.

Dear Brother Root:—It has been a long time since I wrote to you, and believing that you are a true friend to me, I thought perhaps you would like to hear something special about me. Your advice given me last year has never been forgotton, nor has it been adopted and acted out in life in all respects. But so much of it has been, that I am a new man in consequence. Not merely a new man in a financial or business sense, but religiously, spiritually, morally, and mentally; and I feel under lasting obligations to you, and thank you even as I do the Lord. Oh how sweet your society will be in heaven! how inexpressibly dear your voice and presence will be judging from the tone of your letters to me. I sold my interests in the political paper at Webb City, Mo., and came to Carthage in mid-summer, devoting my time partly to my religious paper, and partly to the ministry.—striving to get out of debt, and then suspend my publication. I made an attempt to publish it weekly, but failed, and came out more in dept than before, and was more in trouble than ever. I then determined to follow your advice just as nearly as I could, having no other outlet. A complete change in life began, and every idol I could discover in my heart I took to God to be cast out, let come what would. It may not surprise you, but it did me, that pride ruled my heart almost entirely, excluding the meek and lowly Jesus. To give up all this, and a great deal more, was most trying to me; but it had to go, and it *did* go; and then I came nearer the Lord than I had ever been in all my life. I could plead with God as a man could with man, it seemed to me. My family were gone on a visit; fall and winter were near; I had no money, and was in debt. What could I do? God said, "I am thy portion," I trusted him, and he prepared a field of labor for me, and also pay for my services, partly in advance, so that our wants were met, our most needful debts were paid, and I saw that men were touched under my preaching more than ever. I am a happy man, I love the Lord, and he loves me. My paper is no more. I am preaching all my time and hope soon to be entirely out of debt. Yours in Jesus, — X. Y. Z.

"NOW I LAY ME DOWN TO SLEEP."

Friend Root:—The death-scene which you described in the Feb. No. of GLEANINGS was so beautifully suggestive, that, although entirely unacquainted with the parties (except through GLEANINGS), I could scarcely resist the inward promptings which urged me to embody it in verse. I here send you a copy, should you see fit to publish it.

A tribute to the memory of the infant daughter of Mr. and Mrs. Shane, whose last words were a voluntary repetition of her little evening prayer.

Her work on earth is fully done,
And she is ripened for the skies.
Shall she not hasten to the throne,
When Jesus whispers her, "Arise"?
Her parents weep; but e'en those tears
Are not without a healing balm;
Their little heaven-bound knows no fears,
But all with her is holy calm.

And "now I lay me down to sleep"
(Once more she would repeat her prayer),
"I pray the Lord my soul to keep"
(And God is surely listening there;)
"If I should die before I wake"
(Life ebbs — she hastens the lines to close),
"I pray the Lord my soul to take"
And then she finds a sweet repose.

The "amen" trembled on her lips,
Her little eyes are closed in death;
Such heaven-born glory must eclipse
The proudest monarch's proudest breath.
No far-famed bishop's last adieu
Can cast such death-scene in the shade.
Be ours a trust as pure and true,
When we must in the grave be laid.

And to this end be ours a life
Devoted wholly to the Lord;
With every inbred sin at strife,
According to the Savior's word.
And, bringing forth the daily fruits
Of righteousness and peace and joy,
A Christian life strikes deeper roots
Than aught that's earthly can destroy.

MRS. HESTER A. AWREY.

Cottam, Ont., Feb. 16, 1881.

I presume many of you will be pleased to know how brother Matthews is succeeding in the line that God seems to have so strikingly marked out for him. Read:—

Another year is gone, and we (the Prison Mission) have abundant cause to be grateful to a kind Providence; for over 3,000,000 pages have gone out to Texas, La., Ala., Tenn., Ark., Col., Mo., Ia., Kan., Neb., Min., Wis., Ills., Ind., Mich., and two boxes ready for Raleigh, N. C. No railroad fare in seven States during 1880. Financially, the first year of any success since '75. All would have gone free if friends had been thoughtful and careful in sending. One brother gave (sent me) $50,00 for incidentals and when the year's work was balanced, there was 2 cents left over. Brother and sister Axtell gave a swarm and hive; also divided them, and we received 105 lbs.—$21.00. This furnishes the stationery and all deficiencies in postage and postal cards, and leaves $14.77 for stationery for 1881. Your $5.00 and sister W.'s $5.00 nearly covered stamps, and others' postals. Not being quite enough, sister A. covers deficiency. One kind brother raised house and office rent. Thus the good Lord has cared for us. Drayman brought 12 boxes yesterday, 9 from Bro. Hastings, Boston; one ton fresh choice matter. Railroads passed it *free*; also 2 Iowa sacks and one Michigan package, all in one day. I am busy on boxes for California, and sacks for Kentucky, Indiana, and Illinois prisons. Sent box (100 vols.) magazines to Detroit House of Correction. If you see fit, I wish you would emphasize friends sending me by mail; thus I receive thousands of choice pages, otherwise lost. I now ask the express companies only to carry to prisons from here. Railroads will bill sacks and boxes *free* upon application from me; but some suppose all roads carry *free* if a box is left at any depot. Here lies my trouble and expense.

I gratefully acknowledge receipt of your journal. It is of great value, and I preserve it for future use.

May God reward you, my dear brother, for your deep interest in our prison mission. Prosperity and success to you in your labors for 1881!

Onarga, Ill., Jan. 13, 1881. W. D. A. MATTHEWS.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

THIS CUT EXPRESSES MY FEELINGS AT A LOSS OF ABOUT 15 COLONIES.—C. H. LAKE.

LET US MEDITATE (AFTER SUCH A WINTER).

I HAVE just looked over my bees, and find 16 out of 28 colonies with "nary" a live bee. Among the dead ones are queens from M'Cord, Burch, Cyprian, Palestine, Roop, Oatman, and daughters of imported queens, so I shall not be able to tell who has the best stock. I now have plenty of hives, frames, and combs, for another year at least. "Adversity hath its benefits." I shall need no supplies for 1881. J. L. MOCK.

Columbus, O., Jan. 31, 1881.

I think fully five-sixths of the bees are dead in this locality, and, as a general thing, left considerable honey. D. B. TEAGUE.

West Milton, Miami Co., O., Feb. 8, 1881.

There were 87 colonies of bees in this township Nov. 1, 1880. At present alive, 18; 14 per cent of box hives lived. I. P. C. STEDDOM.

Webster, Wayne Co., Ind., Mar. 12, 1881.

My neighbor who lost 10 out of 26 colonies has now lost 5 more, and says he expects to have almost none left by May 1st. He has been in the business for 25 years. Too much experience makes some persons careless.

Do you not think it no more than fair that those who have given such good reports in the past should also report when they lose so much? I should like to see them in Blasted Hopes when they deserve it. May be I had better tell you that another neighbor who has 16 colonies has no losses this winter, so that I am not the best, you see, and the danger is not all over yet. I think I'll wait until May 1st and then send a report. JAMES A. NELSON.

Wyandott, Kans., Feb. 12, 1881.

Keep on writing, friend N.

As I am always anxious to see reports from others, I will endeavor to give a report (not very encouraging) of the loss of bees in Randolph county. The crop of surplus honey, in a manner, was nothing; yet they had *plenty* stored in the brood-chamber for winter use, some having 50 to 75 lbs. In order to give a little idea of the different modes of wintering, and how they came out, I will give the names of a few of the leading bee-keepers.

E. Davis had 37, lost 37; in Mitchell hive, outdoors, with cloths on top. A. Frazier had 14, lost 13; packed in chaff on summer stands, Mitchell frame. J. Henshan had 14, lost 14; not protected at all; Langstroth hive. J. Thornburg had 31, lost 17; in Simplicity hives, packed in chaff on summer stands. Z. Edwards had 18, lost 18; in American frame, not protected at all. Wm. Johnson had 16, lost 15; in chaff hives, without cushions on top. A. Hoke had 21, lost 20; in bee-house; sawdust-packed walls; temperature kept at desired rate.

This looks like worse than Blasted Hopes, does it not, friend Root? The most of us are *not* going to give it up yet. I think it is better to spend a little money for a few bees than to let the hives and those nice straight combs go to waste, and also the honey, which is so nice for spring feeding.

Winchester, Ind., Feb. 14, '81. J. H. THORNBURG.

BLASTED HOPES, EVEN IN MISSISSIPPI.

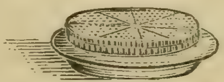
I had last fall 24 hives of bees. They are all dead but 6, and 2 of that number will play out with all the feeding I can do. When they get out of honey they become perfectly demoralized, and feeding seems to do no good. The fruit trees are in bloom, but it seems to do them no good. The long-protracted rains which commenced the last week in August demoralized the people worse than the bees. There is not one man in twenty who will pay his debts. I worked all last year on a credit, and am now nearly as bad off as my poor little bees. They were brought to starvation by the floods, and we are nearly in the same fix from the same cause. But the clouds have dispersed, and every thing is reviving a little. I hope we shall be all right in a short time again.

Ofahoma, Miss., March 6, '81. A. G. DENTON.

Well, friend D., you make out a pretty sad case, even down in your land of almost perpetual flowers. There is certainly some truth in your remark, that when bees get demoralized and discouraged, feeding seems to be of little avail; but, my friend, even if the bees do get thus, you must not. Look up! there is a God above, and one too who has left a letter, written expressly to just such poor sinners as you and I, which says, "Come unto me, all ye that are weary and heavy laden," etc. Do you not sometimes read this letter, friend D.?

MR. MERRYBANKS AND HIS NEIGHBOR.

"THIS hive," says Mr. Merrybanks, "is not intended to be used so much for getting surplus honey, as for furnishing bees by the pound, and rearing queens for the market, etc. However, when a heavy yield of honey comes, and it becomes desirable to have it stored in a shape proper for table use, we will take full combs built on nice clean fdn., and when they are nicely capped over, we will set them aside, either for table use or for the use of colonies that need such aid in the fall. These circular cakes of honey can be laid on a plate, and cut up as we cut up an ordinary pie, giving the children, of course, a smaller slice than the older ones, lest they get sick by having too much sweets." Here friend M. gave a glance at Mary, who sat over by the stove, coughing from the effects of her bad cold. "Should the colony get very strong," resumed friend M., "and show no signs of swarming, we will put another pail right up against this one, placing the mouths of both close together. Now there will be two ways of getting surplus honey in this second pail. One is to attach fdn. to the side, in such a way as to have the bees build the pail full of solid honey, the combs running from the bottom to the top, so that when the pail is carried by the handle, in the usual way, there will be little danger of the combs breaking down."



SURPLUS HONEY FROM THE PAIL BEE-HIVE.

"But what will prevent the queen from rearing brood in this second pail, and your having brood and pollen in it instead of a pail full of pure honey?" suggested John's mother.

"Oh!" said Mr. M., "we can easily manage that by putting a separator of perforated tin or zinc between the two pails. This bucket of honey, you know, will be easily carried to market, and even if a little should leak out there will be no dripping, for the pail will hold honey just as well as water. A round pane of glass can be put over the top of the pail, to keep out dust and insects. By the way, this round pane of glass can also be used to close the mouth of the hive, so as to make a very pretty observatory bee-hive, for timid people. In this case, we should need to sew a sort of cushion around the edges, so as to make the glass fit bee-tight, and also keep in the warm air of the hive."

At this juncture, John's father pulled out his pipe, and began feeling in his pockets for tobacco and matches. Whenever he got an idea in his head to which he wanted to give utterance, he instinctively began to seek for that self-same pipe. Friend M. saw the motion, and so pleasantly shook his head at him that he put the pipe back in his pocket. Of course his neighbor never presumed to dictate in such matters, but he had such a pleasant, kind, good-natured way of reminding one of a failing, that the two were never any the less friends, even though they were not alike in many of their ways and habits. He knew that his wife very much disliked to have him smoke in-doors also, and so he very pleasantly put the pipe back in his pocket, and proceeded to criticise the new hive without it.

Friend M. here took a chair and sat down, for he was well aware that the soundest and most sensible criticisms would come from John's father, for he was, despite his many shiftless and dilatory ways, a man of good practical common sense, and one who might easily have been a man of means and influence had it not been for some failings of his, and his love of the companionship of a class that were really very much his inferiors. He commences,—

"But, neighbor M.," says he, "even for rearing bees and queens, you have got to take out all the frames before you can get at the last one, and you have not only got to put each one back in its exact place every time, but you have got to put each comb the same side to the front as well. Is this so?"

"Exactly so."

"And is not this a great objection?"

"On the contrary, it is just what I think we need to do, to make the most bees and honey."

"Why, then, do you not go back to the old straw hive, or hollow gum, and be done with it?"

"I would go back to the straw hive, or some thing pretty nearly like it, if the combs were movable. Now just look here a minute. To say nothing of the advantage of these round combs, to retain the animal heat, we will consider a little the way many of the movable combs are used. Hives are made to open easily, nowadays, and with the modern smokers it is easy to open a hive safely any time we wish. Well, a new beginner gets a hive of bees, and proceeds to open up the brood-nest, some cool day in April. He gets the combs all out, finds the queen, turns the combs, many of them, end for end, throwing a patch of unsealed brood right opposite a cold cake of honey, or some empty cells that the bees had not yet covered with their cluster. Perhaps he thinks to put the combs back in the same order they were before, and perhaps he does not. May be, as he has read an empty comb should be placed in the center, to give the queen empty cells in which to put in eggs, he purposely divides the brood-nest. As the combs had been built by the bees, or at least trimmed and lengthened out so as to give just room for the bees to pass and do their work (letting a depression on one fill an elevation on the next, etc.), when they are swung around and replaced, the bees have all this work to do over again. Very likely, if one should look carefully after the hive was closed, he would find great empty hollows left between some of the combs, and bulges pushed right into some comb, in another place. In the latter case, perhaps a dozen poor little bees were mashed into the next comb.* Well, this is not the worst of it. Bees have a wonderful tact for economy of steps in the working season. They put the new pollen for the young unsealed brood right in the cells opposite, that the nurses may have the food right where it is needed. Where you find a comb of unsealed larvæ, you will often see the comb opposite to it one solid mass of pollen-filled cells; and if a couple of rainy days ensue, this pollen will be all used in an almost incredibly short space of time. Now, what will be the effect of interposing a comb just here, or of placing this great wall of pollen off to some other part of the hive? Madam, what would you say," here friend M. jumps up and turns to John's mother,—

"What would you say if some one should come into your house some ironing-day, and put your cook stove over in the lot across the way, your basket of clothes up stairs, and your ironing-table down cellar, and tell you to go on with your work that way, for modern science had shown that more and better work could be done thus? Now, this is not exaggerated. As we look over the journals, we fall to wondering why it is, that beginners make such awful work of wintering, while the old hands winter their hundreds, losing not to exceed 5 per cent, and some not even a colony. Is it not rather a wonder that they succeed in getting colonies through the summer even?"

Here our friend wiped his face with a large red handkerchief, and began feeling in his pockets for something he wanted. While he was hunting, John stepped backward, and, striking his heels against the wooden bowl that had not yet been placed on the table, fell over into it, and split it in several pieces, leaving the candy in nice shape to give that poor colony out of doors.

John's mother was perhaps the most troubled one of the party, at this his second accident, and commenced a most humble apology; but friend M. stopped her by saying he was more than half glad it was broken, for the bees would have built an empty comb in the bowl any way, and that, on the whole, he preferred a division-board made with a cushion around the edge, with a good stout handle attached, so it could be pushed into the hive with a sort of revolving motion, making so tight a fit that no particle of the warm air of the hive could get out, to say nothing of leaving cracks or channels where bees can get through. Here he fished from one of his pockets a copy of the *British Bee Journal*, giving some of friend Abbot's ideas about working with hives and combs. Here is what friend M. read to his little audience:—

WHAT TO DO, AND WHEN AND HOW TO DO IT.

INCREASING THE BROOD-NEST.—Under the influence of stimulative feeding in hives in which the bees have been crowded together by the dividing-board, the breeding will go on so rapidly that every available cell will be occupied with eggs and larvæ before there has been time for young bees to come into life, and, acting upon impulse, amateurs will be apt to enlarge the nest to give further liberty to the queen to deposit more eggs and cause more brood to be created. In this matter we would advise extreme caution. Bees that are well able to maintain life-supporting heat for themselves and the brood (for the brood generates comparatively little and needs the presence of bees) in, say, three frames of comb, may find a difficulty in cold weather in generating sufficient for that of a fourth frame, and its introduction would probably do mischief. We would, therefore, refrain from adding the fourth until the population has begun to increase and the chief of the brood approaches maturity, and then we would place the added empty comb by the side of it *pro tem.* Many writers advise that the comb in question should be placed *between* those containing brood, which advice is sound when the weather is sufficiently mild to preclude danger, but in early days we would prefer that the bees indicate sufficiency of strength to take charge of it (by commencing to breed in it) before we would force its absolute care upon them by giving it a central place. Bee management is like playing a game of draughts or chess—it may be very easy to make a dozen moves, but it is stupidly absurd to move at all without considering what is likely to happen afterward.

"There!" exclaimed he after he had finished. "That is what I call good sound sense. Now I want to tell you some of my ideas about feeding:" but, friends, as our story is getting long, I think we will listen to the feeding part next time.

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*I have found bees thus imprisoned, and still alive, on opening a hive four days after it had been hastily closed by the careless owner.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, APR. 1, 1881.

FOR the Lord God will help me; therefore shall I not be confounded: therefore have I set my face like a flint, and I know that I shall not be ashamed.—

ISAIAH 50:7.

WE have to-day, March 31st, 3935 subscribers, and a yard of snow on the ground—more or less.

MAKE every day count, and at night ask God's blessing on what you have done through the day.

WE will pay 15c. each for the April No. of GLEANINGS for 1879. Put your name on the wrapper, and drop us a postal.

A GREAT number of letters are on hand, waiting for a place, so do not be disappointed if your own is not in this number.

Not even yet any Dictionaries, but we have most excellent promises of some *very soon.* We will return the money any time you wish.

I OMITTED to say, last month, that the price of the book, Barn Plans and Out-Buildings, is $1.50, and that we can mail it on application.

IF any one who advertises in GLEANINGS does not fulfill all promises and settle up all differences satisfactorily, you will confer a favor by reporting him to us.

FRIEND Burch, too, reports having wintered *every colony* in his large apiary; but I really wish he had told us how many there were. Please say how many, friends, when you report.

Nice, pure, maple sugar, stirred, white, in 1 lb. bricks, at 10c. per lb. Tip-top for bees or children. Nine cents per lb. only, in large cakes, just as we buy it from the farmers.

THE *Kansas Bee-Keeper* is the title of a fair-looking little sheet published by our friends Scoville and Anderson, of Columbus, Kansas. Vol. 1 No. 2 is just on our — corner of the type-writer.

FURNISHING bees in the spring months will likely be precarious, and, therefore, please let us all resolve to be patient. You can have your money back any time, when you get tired of waiting.

OUR friend R. Wilkin, of San Buenaventura, Cal., has received one order from England for 20 tons of honey. What do you think of that? If all he sends out is as good as the lot he sent us, I don't wonder.

Do not stand around with your hands in your pockets, and have the neighbors all laughing at you. Go to work, and let the neighbors see that, if a bee-keeper is down, he by no means proposes to stay down.

BUY your bees and queens of those nearest to you who advertise; but do not send to me, unless you are willing to wait until your turn comes. If you are in a hurry, tell them to return the money, unless they can ship inside of a specified time.

WE shall not be able to send our bees by the pound before April 15th, and not then unless the weather is favorable. If you must have them right off, I think some of the friends in the South will be best able to furnish them.

AFTER getting the engravings made for a sun evaporator, for ripening honey, we are so unfortunate as to have lost the letter that came with the drawings. May we trouble the friend who sent the plan, to give us his name once more?

SIGN your name to your letters, or—get some envelopes and paper with your name printed on them. See how little they cost, by referring to the counter store. Two letters are at hand to-day, containing money, without a scratch to tell who sent it.

WE have tried four queens by mail, in the Peet cages, and all died promptly. At their present value, this is rather expensive business, and I think we shall not try many more before about May, as per our price list. We have sent some cages to a Southern friend, with instructions to send us one queen at a time until they begin to come through all right.

THE willow-tree friend Culp mentions on pape 14, Jan. No., has arrived, and it is a thing of beauty, I assure you. Even some cuttings sent along with it are covered with the white catkins, almost ready to bloom, showing that it blossoms at a very early age. It will be one of the bright objects on our honey farm, when covered with bees the first thing in the spring.

SAVE your hybrid queens, and fill up those empty hives. Save all the blacks, and hybrids too, that you can lay hands on, anywhere about you. Stop buying supplies and high-priced queens, but make that apiary bring in some money. *Ask your wife* if she does not think this good advice.

PUT your name and address on your letter, *before you write a word.* If you can not afford to have it printed on, *write it.* Letters containing money are now of almost daily occurence, without any trace to tell who wrote them, or where to send the goods. "Whatever *does* ail you," to be so careless? I a'nt cross a bit,—only in earnest. "Do you mind?"

A SWARM OF BEES HALF A MILE LONG.

NO, no, dear reader, it isn't one of *our* swarms, but it is the *Apis dorsata*, where Frank Benton is, in the Isle of Ceylon. He didn't see them, but a gentleman told him that, when they swarmed, the swarm was *almost* half a mile long. I will give you the letter telling about it, next month. Don't get uneasy, boys. Frank will take good care of them.

IN giving credit for the tumbler feeder last month, I should have said Finch & Bartlett, where I said Finch & Crane. This came about innocently, by supposing it was the present partner of Mr. Finch, instead of his former one, Mr. F. J. Bartlett, of Strongsville, O. This latter gentleman seems to be the inventor, while Finch only presented the feeder to my notice. I presume it was also partly, if not all, my carelessness, in getting the idea that Finch was the principal inventor of the feeder. I hope both gentlemen will pardon me.

WE have just had a most pleasant visit from Dr. C. C. Miller, of Marengo, Ills. Friend Miller has declined what most of us would call a large salary, just that he may live out in the country, and work with bees. As he raises honey and nothing else, he takes just as much pains to keep good hybrids as any other; and I am inclined to think there is a good point for all of us who are honey-raisers. Take good care of the queens you have, instead of wasting time and money, and keeping your hives queenless, and then perhaps getting a queen that will produce less honey than the ones you took out.

SEVERAL have written me that the Waterbury watches are offered by others at a less price than what I sell them at. I admit this; but it is for those sent out untested. We are now testing every watch that we send out, and those we sell singly at retail are all carried in the pocket before being sent you. If we do this, I can not sell them any less than our advertised rates. My experience has been, that none of you are satisfied with a dead watch or dead queen *at any price*, and I therefore shall not ask you to pay your money for such. Perhaps not more than one in five fail to go right off, as they come from the factory; but nobody that I know of wants to be that fifth man.

EVERY few days some friend writes an indignant letter, saying he ordered something just as plainly as could be, and yet we sent some other thing. The letter is looked up, and the fault was not ours, but in the order. We mail the letter back, to show we were not at fault, and then comes quite a humble apology. Now, in view of this fact, would it not be well to be a little mild in complaining, and say you *think* you ordered so and so, instead of being so very positive? Suppose even when you *know* you are right, you should use the little preface to your remarks, "If I am not mistaken," I ordered so and so. Our boys and girls here are trying hard to be faithful, just as you are; but it eases the burdens of life amazingly, to get gentle, kind words. The most of you are gentle and kind; but I think we can all improve a little if we try. Do not you? Sometimes I have a dim recollection of something that "suffereth long, and is kind." Was it you or I, think you?

GOOD NEWS.

THE American Grape Sugar Co., of Buffalo, N. Y., have at length produced a sugar entirely free from the slight bitter taste that has heretofore characterized even the best refined grape sugars. It is a pure product of Indian corn, and is as pure and simple a sweet, as the best grades of maple sugar. Just "taste of it yourself," if you are incredulous. We will mail you a sample for 5c., which, I think, will settle the discussion. You might as well try to stop the snow from coming down (this 29th day of March) as to try to stop this wonderful new industry of making good sugar from Indian corn. Instead of the unkind words in regard to it that have been mostly prompted by ignorance and prejudice, it seems to me more meet we should unite in a prayer of thanksgiving for a blessing sent to the children of men, hardly less, in its promise, than the one that came so suddenly a few years ago from the depths of the earth, which is even now shedding light through your home, and, for aught I know, illumines strongly the pages your eye rests on this moment.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

ST. LOUIS, March 23.—Present market quotations are as follows: *Honey.*—Ready sale. Comb 16@18; top rate for fancy bright; strained and extracted, 11@12c ℔ lb. *Beeswax.*—Firm. Prime yellow 21, dark at 20c.
R. C. GREER & Co.

NEW YORK.—Replying to your postal of the 19th inst., permit us to say, that buyers' quotations are as follows: *Honey.*—White clover, in neat packages, 16@17; fair clover, in neat packages, 13@15. Other off grades are selling at lower prices. Buckwheat honey in neat packages, 11 to 13. Large boxes, 2c per pound less than above prices. *Beeswax.*—Prime quality 24 to 27c for 200lb. lots.
March 23, 1881. H. K. & F. B. THURBER & Co.

CLEVELAND.—We give you Cleveland market report as follows: *Honey.*—Choice white, 1-lb. sections, unglassed 19@20; choice white, 2-lb. sections, unglassed, 17@18; choice white, 2-lb. sections, glassed, 15@16; dark, 1 and 2lb., unglassed, 14@16. Extracted, in 10 to 30 lb. cans, 12@14. Comb honey is scarce, and good demand; extracted, fair supply, light demand.
A. C. KENDEL.
March 20, 1881.

CINCINNATI.—Under date of March 22d, friend Muth writes: No changes in the prices of honey and wax. The demand is fair for extracted honey. Comb honey entirely neglected.

CHICAGO, March 22.—Present market quotations are as follows: *Honey.*—Light comb honey is in great plenty, and prices weak and uncertain, but quoted at 18@20c for 1-lb. and 2-lb. boxes for choice, and 14@16c for fair to good, while dark lots, large boxes, &c., are worth 10 to 12c. Extracted honey, 8@10c. *Beeswax.*—20@23c for light, and 15@17c for dark.
ALFRED H. NEWMAN.

I have for sale 1 bbl. of mixed clover and fall gathered honey (not buckwheat, however), which I will sell for 9c per lb., delivered on the cars here. Barrel, 75c.
BYRON WALKER.
Capac, St. Clair Co., Mich., March 20, 1881.

CIRCULARS AND PRICE LISTS RECEIVED.

Wm. Cary & Son send out a very neat circular. We are so much pleased with their notice of the Cyprian bees that we copy their remarks.

"CYPRIAN BEES.—We will raise a few queens of this variety during the coming season to supply those of our customers who may wish to try them, but can give no guarantee as to their working qualities, as they have not been thoroughly tested; all we can say is, they are beauties as far as looks is concerned. The price of these queens will be $1.00 each."

We will furnish both Cyprian and Holy-Land queens at same prices, under same conditions.

J. P. H. Brown, Augusta, Ga., issues a tasty 26-page price list of apiarian supplies.

Hiram Roop, Carson City, Mich., has sent us a one-leaf catalogue of apiarian fixings.

J. P. Moore, Morgan, Ky., sends out an elegent cheirograph price list.

W. W. Cary, Jr., Colerain, Mass., sends us a 4-page price list of hives, bees, etc.

H. M. Morris & Co., Rantoul, Ill., send a 4-page circular and price list of fruit and shade trees.

From H. Barber, Adrian, Mich., we have received a 2-page price list of hives, bees, poultry, and small fruit.

James A. Nelson, Wyandott, Kan., dealer in fdn., etc., has sent a 4-page price list of his specialty.

F. L. Wright, Plainfield, Mich., has issued a neat cheirograph circular relative to small fruit, bees, queens, etc.

The Champion Bee-Hive Mfg. Co., Newcomerstown, O., send out an 8-page circular of apiarian supplies.

G. W. Thompson, Stelton, N. J., has sent a 4-page price list of bee-keepers' supplies.

A. Lamontagne, Montreal, Can., has sent us some specimen pages of "The Rational Culture of Bees, Grapevines, and Sugar-cane." The work is in the French language, and beautifully illustrated.

Paul L. Viallon, Bayou Goula, La., has issued a very pretty 16-page circular of apiarian supplies.

Friend Good, Nappanee, Ind., issues a nice cheiro-postal price list of queens and bees, Holy-Land strain.

J. F. Hart, Union Point, Ga., sends an 8-page price list of hives, frames, etc.

W. H. McDaniel, New Carlisle, Ind., sends a 6-page circular of hives and bees.

George H. Lamb, Wilmington, N. C., sends us a postal price list of Italians queens.

The American Novelty Works, Worcester, Mass., send two neat circulars of hives and bee-keepers' supplies generally.

S. Valentine, Double Pipe Creek, Md., has sent us an elegant 4-page price list of queens, bees, etc.

L. C. Root & Bro., Mohawk, N. Y., send us a nice 12-page circular of bee-keeping supplies.

F. A. Snell, Milledgeville, Ill., sends out a pretty 18-page price list.

J. M. Brooks & Bro., Columbus, Ind., dealers in Italian bees and fancy pigeons, send a two-page circular.

Our friend Oliver Foster has sent a most beautiful cheirograph circular of his fdn. machine, queen bees, etc. It is worth sending for on this account if nothing more.

Dadant & Son send us an extra nice circular, with some extra nice samples of fdn.

A very pretty catalogue of 40 pages from H. A. Burch & Co. Aside from the description of goods for sale, a large part of the little book is devoted to useful hints in regard to working with bees.

Chas. D. Duvall, Spencerville, Md., sends us a 4-page price list of queens, bees, etc.

Vanderwort Comb Foundation

took the premium over Flat Bottom, Dunham, and all other makes at the N. E. Bee-Keepers' Association at Utica, Feb., 1881.

Price of foundation made on same machine,
1 to 25 lbs., for Section Boxes,...................... 55c
25 to 100 " " " " 50c
1 to 25 " " brood chamber,......................45c
25 to 100 " " " " 40c

I. L. SCOFIELD, Chenango Bridge,
4-6d Broome Co., N. Y.

CYPRIANS and Italian Queens or Nuclei. Descriptive Circular and Price List sent free.
Address JULIUS HOFFMAN,
1-4 Fort Plain, Montgomery Co., N. Y.

ITALIAN BEES AND QUEENS!

Bees, Full Colonies and Nucleus; Bees by the pound, Combs of Brood, Section Boxes and Comb Foundation. Prices reasonable. For further particulars address FISCHER & STEHLE,
4d Marietta, Washington Co., Ohio.

HOME AT LAST!

Having bought the planing mill of H. C. Smith, and supplied it with new and improved machinery, and experienced workmen, I have 30,000 feet dry white pine lumber, and got the Simplicity Bee-Hive pattern of A. I. Root, and manufacture the Langstroth Hive and Apiarian Supplies. Send and get a Price List. SID. D. BUELL,
3-5d Union City, Branch Co., Mich.

ROOT CHAFF HIVES,

Nailed, painted, and chaff packed, with frames, $2 25 each. Same unpainted, $1.90. Same in flat, $1.60.
4 EZRA BAER, Sterling, Whitesides Co., Ill.

Strawberry Greenhouse BEDDING AND Vegetable Plants!

Choice new varieties; spring list now ready; send for it. R. MANN & SON, Lansing, Mich.
4d P. O. Lock Box, 374.

ITALIAN QUEENS! I am prepared to furnish pure queens at a low price. Untested, in May, $1.00; June, 90c; after, 80c. Send for circular.
CHARLES D. DUVALL,
4-9d Spencerville, Mont. Co., Md.

FOR SALE, 3000 all-wood brood-frames in the flat; $10.00 per 1000; the lot all together, $25.00. Speak quick. A. A. FRADENBURG,
4-5d Port Washington, Tusc. Co., O.

SCROLL-SAWYERS. Send 2-ct. Stamp at once for Special Offer, and save money. Be lively.
4 C. H. PARKER, Coldbrook Springs, Mass.

NOW READY!

Our new circular and price list for 1881. We have something new for every bee-keeper. Remember, we are largely engaged in practical bee-keeping, and know what supplies of are most value in the apiary. You should see a description of our feeder. You will want one. Our new **Double-Draft Smoker** is perfection. See what one of the most practical and best-informed bee-keepers of the country thinks of it:—

"Since your great improvement in smokers, as regards to the double blast, you undoubtedly have the inside track of all the others in the market. This, with the superior workmanship and materials used, should place your smoker at the head of the list, and secure for it a favorable patronage for 1881."

G. M. DOOLITTLE.

Price of smokers: By mail, $1.50 and $1.75.
Our book,

QUINBY'S NEW BEE-KEEPING,

is pronounced the most practical work published. Price, by mail, $1.50. We furnish every thing used in advanced Bee-culture. Send for illustrated circular. L. C. ROOT & BRO.
Mohawk, Herkimer Co., N. Y. 4tfd

MAKE BEES PAY

By introducing the best strains, tested for excellence. My imported queen of '79, *picked* from Root's *best grade*, still reigns with power.—Queens from her:—Tested, $2 50; untested, $1.00. After July 1st, tested, $1.50; untested, 75c. Same warranted pure, $1.00. Mailed safely, free. My drones are best pure stock. Full colonies of bees, $8.00. Nuclei, 2-frame, $2.00. USE MOLDED FDN.; it needs no wire, will not sag, and *pays big*. Price, 40c. My new machine, $5.00; outfit, $10.00. Any size made to order. Satisfaction guaranteed. Send for circular, and *keep posted.* OLIVER FOSTER,
4tfd Mt. Vernon, Linn Co., Iowa.

DON'T
BUY
Your Supplies

Till you have read new price list for the spring trade. Wax is now cheaper, consequently I can furnish you a fine article cheap and made on the best machine;

ALSO ITALIAN AND CYPRIAN BEES.
QUEENS, HIVES, SECTIONS,

and any thing you may want in my line. Price List free to all. **J. V. CALDWELL.**
4-9d Cambridge, Henry Co., Ill,

HIVES, SECTIONS, AND BOXES

Material for Langstroth Hives, including Brood-Frame, 40 cts. each; Lewis V-shaped groove One-Piece Section, any size to 6x6, $5.00 per 1000. Lewis One-Piece Honey-Boxes, all sizes, $2.00 to $4.00 per 100, including glass; Dovetailed Sections, any size to 6x6, $4.00 per 1000. Manufacturing experience of 20 years. Send for Price List.

G. B. LEWIS (Successor to Lewis & Parks),
Watertown, Wis., April 1, 1881.

N. B.—There is *no patent* on the Lewis One-Piece Section. 4tf

---

SEND FOR MY LARGE ILLUSTRATED CIRCULAR! It will tell you what I have for sale. If you keep Bees, don't fail to do it.
Address B. S. UNDERHILL,
4-6d Williamson, Wayne Co., N. Y.

Seeds and Plants!

I will send prepaid, and guarantee safe arrival in good condition, purchaser's choice, of the following collections:—

20	Verbenas,	$1 00
15	Basket or Bedding Plants,	1 00
12	Geraniums,	1 00
12	Tuberoses,	1 00
12	New Varieties Colesu,	1 00
12	Varieties House-Plants, consisting of 3 Geraniums, 2 Coleus, 1 Century, 2 Abutilons, 2 Begonias, 1 Cigar-Plant, 1 Heliotrope	1 00
12	Best Varieties Vegetable Seeds,	50
12	" " Annual Flower-Seeds,	75
9	" " Pansy Seeds,	1 00
6	" " Perennial Flower-Seeds.	60
6	Choice " for Greenhouse or pot culture	1 00
12	Best Early Tomato Plants,	25
12	" Late " "	25
12	Sweet-Mountain Pepper Plants	25

Purchasers may divide collections. Send for Catalogues. WM. F. ELWOOD,
4d (195 Dominick St.) Rome, Oneida Co., N. Y.

Nuclei, Cyprian Queens and Bees, ... Cheap!

I will sell my bees, 100 stocks of Cyprians in L. hives, and in good condition.

Last season, neighbor J. S. Hughes and I Cyprianized all of our bees, and those within range, with queens reared from the Jones importation, and Hoffman's drones. Prices after June 1st:—1-frame Nucleus, from $2.00 to $2.50; 2-frame, $3.00 to $3.50; 3-frame, $4.00 to $4.50. Nuclei will be well stocked with bees and brood, including pure Cyprian queen of this year's raising. Full stocks (10 L. frames) $7. to $9.00. A few mismated Cyprian queens for sale at 60c in Peet cage. Warranted Cyp. queens, $1.50. Tested, after July 1st, $2.00. No foul brood in this section. Bees for sale by the pound after June 1st. Satisfaction guaranteed. For further information and ref., please address J. B. R. SHERRICK,
(No circulars.) Mt. Zion,
(This ad. appears but once.) Macon Co., Ill. 4

Plymouth Rock & Light Brahma
EGGS!

From extra-fine breeding yards, at $2.00 per 13, or $3.50 per 26. **N. H. ALLEN,**
4-6d KIRKWOOD, ST. LOUIS CO., MO.

CHOICE ITALIAN BEES
FROM ORCHARD APIARY.

Dollar Queens, only 80c; Tested, $1.50. Ten-frame colonies, $5.75 to $8.00. Every thing first-class, and equally low. ☞ Send for circular, and *save money*.
3tfd E. A. THOMAS, Colerain, Franklin Co., Mass.

Eggs for Hatching!

From my prize-winning Brown Leghorn Fowls, which are unexcelled in America for Size, Laying Qualities, and Beauty, at $2.00 per 13, $3.50 per 26, or $5.00 per 39, packed in baskets, and warranted to hatch well. W. N. CROFFUT,
4 Box 796. Binghamton, Broome Co., N. Y.

J. M. BROOKS & BROS'.
AMERICAN ITALIANS.

PURITY OF STOCK A SPECIALTY.

4-9d CIRCULARS FREE.
COLUMBUS, - BARTH. CO., - INDIANA.

SUCCESS!

"There's nothing so successful as SUCCESS." For many years past, we have labored to improve the Italian bee, aiming to obtain a strain of bees that would safely survive our coldest winters. That we can write SUCCESS upon our (apiarian) banner is indicated by the fact that even in this most disastrous winter, every colony of our large apiary is in fine condition. Others report fine success with our Italians. On March 14th, M. E. Loehr, of Palestine, Ind., wrote us that, last fall he had 98 colonies, and now all are dead but three—two of these being very weak. The other colony contained one of our queens, concerning which he says:—"I was surprised to find this colony strong and healthy, and am sorry I did not purchase all my queens of you, they being stronger in bees now than in the fall. Could say much more in praise of your bees." To the

READERS OF GLEANINGS

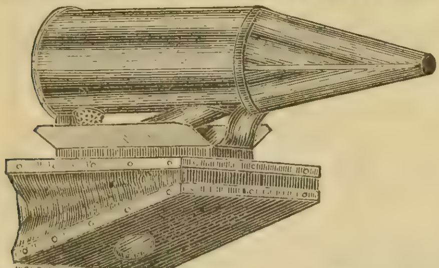
we would say: If you want bees that are peaceable, industrious, aad hardy—in short, want to possess the BEST bees, **Try our Italians.**

OUR 40-PAGE CATALOGUE, FREE TO ALL.

4d **H. A. BURCH & CO.,**
SOUTH HAVEN, VAN BUREN CO., MICH.

VAN FRANK'S DIRECT DRAFT

COLD-BLAST BEE-SMOKER!



Simple and durable, and not liable to get out of repair. Price $1.00. Write for a liberal discount on ½ doz. lots. Single smokers sent by mail on receipt of $1.15. Address W. W. VAN FRANK,
4d Newberg, Cass Co., Mich.

1881.

Send for our new Circular and Price List of Full Colonies, Nuclei, and Queens. We guarantee satisfaction. S. D. McLEAN & SON,
2-7d Culleoka, Maury Co., Tenn.

GRAPE SUGAR
For Feeding Bees!

Send for our Price List before you buy.
3-5d **I. L. SCOFIELD,**
CHENANGO BRIDGE, BROOME CO., NEW YORK.

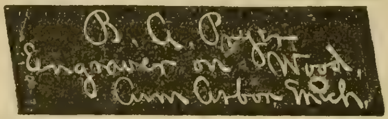
WANTED!

Employment in an apiary during the summer months. Have had 5 years experience in the work.
4tfd E. P. STILES, Student, Ann Arbor, Mich.

CHOICE QUEENS
FOR 1881!

Dollar Queens.............	$1 00
Tested "	2 00

I guarantee satisfaction every time, or money refunded. No blacks in my neighborhood. All queens raised from A. I. Root's imported stock. Send for circular. HOWARD NICHOLAS,
4-9d Etters, York Co., Pa.


B. A. Pryer
Engraver on Wood,
Ann Arbor Mich.

ALBINO, ITALIAN, AND HOLY-LAND QUEENS, FULL COLONIES, ETC., FOR 1881!

I am prepared to furnish early queens, pure Albinos, Italians, and Holy-Land Queens, bred from select stocks. Warranted to be pure; safe arrival guaranteed. Also Hives, Novice's Extractor, and Apiarian supplies generally. Send for price list. Address
S. VALENTINE,
Double Pipe Creek,
3-5d Carroll Co., Md.

CHAFF HIVES! A SPECIALTY!

SEND FOR CIRCULAR.
J. P. WATTS,
LUMBER CITY,
2-4 Clearfield Co., Pa.

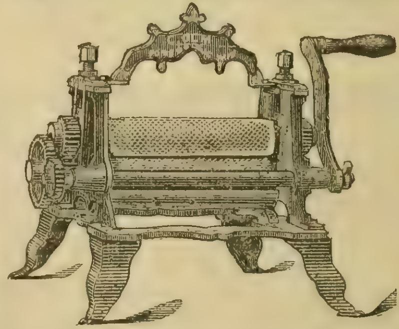
BEE-KEEPERS' SUPPLIES

It will pay you to get our prices before purchasing your Supplies. Good Langstroth Hives with 8-inch cap, frames, quilt, etc., in the flat, 60 cents each. Manufactured from good pine lumber. Workmanship unexcelled. Crates, Sections, Extractors, and Dunham Foundation, a specialty.
HIRAM ROOP,
2-6d Carson City, Montcalm Co., Mich.

BEES FOR SALE!

50 Colonies good healthy swarms of **Italian Bees at $10. each,** in nearly new, 8-frame, well-painted hives, delivered on board cars in good shipping order. E. H. SHERWOOD,
4-5 Fishkill, Dutchess Co., N. Y.

C. OLM'S COMB FOUNDATION MACHINE.



9-inch.—Price $25.00.

The cut represents the 9-inch machine; the cheapest made until now. Send for Circular and Sample.
2tfd **C. OLM,** Fond du Lac, Wis.
JOHN BAXTER, Pickering, Ont., agent for Canada.

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C. OLM'S COMB FOUNDATION MACHINE.

SEND FOR SAMPLE AND CIRCULAR.

5tfd **C. OLM,** Fond du Lac, Wis.

HEADQUARTERS FOR

PURE ALBINO AND ITALIAN QUEENS AND COLONIES for 1881. As I make queen-rearing a specialty, I guarantee to those ordering from me just what they bargain for. Circulars free. Address D. A. PIKE,
2-4d Box 19, Smithsburg, Washington Co., Md.

HIVE MANUFACTURERS.

Also imported and home-bred Queens, Full Colonies, and nucleus colonies. Bee-Keeper's Supplies of all kinds. Market price for beeswax. 4-7d
NICHOLS & ELKINS, Kennedy, Chaut. Co., N. Y.

LEWIS & DETWILER,
Manufacturers of
APIARIAN SUPPLIES,
4-5d **24 SUMMIT ST., TOLEDO, O.**

YOUR NAME, printed on 25 extra choice chromo, &c., cards, and 5 choice Gladiolus bulbs, for only 25c. C. E. CANOLES, Hereford, Balto. Co., Md.

SAVED!

You can save time and money by using our Comb Foundation. We make a choice article for brood frames, also a very superior article for sections. Samples of each will be sent free to any address. Send postal card for samples and circular.
Address, J. A. OSBORNE,
5 Rantoul, Champaign Co., Ill.

All who are in want of nice, prolific
ITALIAN QUEENS!
Will do well to consult my circular before purchasing elsewhere. *Don't fail to do it.*
5d E. A. THOMAS, Colerain, Franklin Co., Mass.

ITALIAN QUEENS!

From select queen of A. I. Root's importation. Queens from home-bred stock if desired.
Tested, in May, $3.00; June, $2.50; after, $2.00. Untested, in May, $1.50; June, $1.25; after. $1.00. Bees, per lb., same as untested queens. All queens warranted. Safe arrival and satisfaction guaranteed. S. A. SHUCK, Bryant, Fulton Co., Ill. 5d

GOOD NEWS! MOLDED FOUNDATION.

The new metal fdn. mold a Success! I hope to furnish them soon. Improved plaster mold, $3.75. Bees and queens of profitable strains.
See OLIVER FOSTER'S circular,
5d Mt. Vernon, Linn Co., Iowa.

1881 EARLY 1881
SOUTHERN QUEENS

Ready in MARCH. Bred from best imported mother. Tested queens to breed from, $3.00. Ordinary, $2.50. Untested, $1.00. Postpaid. Send in your orders. Address
1-5d CHAS. S. LARKIN, Raceland P. O., La.

OUR PRICES FOR JULY!

One Pound pure Italian Bees,	85
One " hybrid Bees,	75
One Comb of Brood,	75
One untested Queen,	$1 00

Special prices on large orders.
5tfd FISCHER & STEHLE, Marietta, Wash. Co., O.

D. S. GIVEN,
Inventor and Sole Manufacturer of the
FOUNDATION PRESS.

All Presses warranted to give satisfaction. The only invention to make fdn. in wired frames. Our thin and common fdn. for '81 is not surpassed. Send for Catalogue and samples.
4-6d D. S. GIVEN, Hoopeston, Illinois.

BEE-KEEPERS, Send one dollar for the EXCELSIOR COLD-BLAST SMOKER, the very best. Sent free by mail.
W. C. R. KEMP,
5 Orleans, Orange Co., Ind.

No. 013 Price 50 Cents.

HAND-FORGED RAZOR STEEL KNIFE FOR 50 CENTS!
MAHER & GROSH, 34 N. MONROE ST.,
TOLEDO, OHIO.

Hand-Forged Razor Steel Knife for 50 cents. Maher & Grosh, 34 N. Monroe St., Toledo, O., will mail Knife like cut, post-paid, for 50c. Extra heavy 2-blade for rough usage, 75c. *Our Best* 2-blade, oil temper and tested, $1. Pruner, oil temper, $1. Pruning Shears, $1. All goods exchanged free if soft or flawy.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Newark, Wirt Co., W. Va.	2-1
*A. I. Root, Medina, Ohio.	
*H. H. Brown, Light Street, Columbia Co., Pa.	1tf
*E. M. Hayhurst, Kansas City, Mo.	1-12
*Paul L. Viallon, Bayou Goula, La.	1tfd
*D. A. McCord, Oxford, Butler Co., O.	1-12
*S. F. Newman, Norwalk, Huron Co., O.	1tfd
*J. T. Wilson, Mortonsville, Woodford Co., Ky.	6-6
*Chas. G. Dickinson, Sou' Oxford, Chen. Co. N.Y.	1-10
*Wm. Ballantine, Sago, Musk. Co., O.	2tfd
J. S. Tadlock, Kingsbury, Guad. Co., Texas.	3-7
*W. H. Nesbit, Alpharetta, Milton Co., Ga.	3tfd
*J. O. Facey, New Hamburg, Ont., Can.	4-9
*H. Nicholas, Etters, York Co., Penn.	4-8
W. S. Canthen, Pleasant Hill, Lan. Co., S. C.	4-6
*John Conser, Glenn, Johnson Co., Kans.	4-9
*J. H. Burrage, Concord, Cab. Co., N. C.	5
*Fischer & Stehle, Marietta, Wash. Co., O.	4-9
*Jas. P. Sterritt, Sheakleyville, Mercer Co., Pa.	5tfd
H. Barber, Adrian, Len. Co., Mich.	5tfd
*Oliver Foster, Mt. Vernon, Linn Co., Iowa.	5tfd

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.	
Sid. D. Buell, Union City, Branch Co., Mich.	2-7
P. L. Viallon, Bayou Goula, Iberville Par., La.	1tfd
S. F. Newman, Norwalk, Huron Co., O.	1tfd
J. F. Hart, Union Point, Greene Co., Ga.	4-3
M. S. West, Flint, Genesee Co., Mich.	2-7

Foundation Manufacturers.

Who agree to make such foundation, and at the prices given, as described in our circular.

A. I. Root, Medina, Ohio.	
Jas. A. Nelson, Wyandott, Wyandott Co., Kans.	4-9
E. S. Hildemann, Ashippan, Dodge Co., Wis.	4-5

Bees by the Pound.

Those whose names appear below agree to furnish bees by the lb., and at the prices given in our circular.

I. L. Scofield, Chenango Bridge, Broome Co., N. Y.
S. C. Perry, Portland, Ionia Co., Mich.
J. P. Moore, Morgan, Pendleton Co., Ky.
W. R. Whitman, New Market, Madison Co., Ala.
Chas. Kingsley, Greeneville, Greene Co., Tenn.
C. D. Wright, Baxter Springs, Cherokee Co., Kans.
H. B. Harrington, Medina, Medina Co., O.
W. St. Martz, Moonshine, Clark Co., Ills.
O. H. Townsend, Hubbardston, Ionia Co., Mich.
G. W. Gates, Bartlett, Shelby Co., Tenn.
W. S. Canthen, Pleasant Hill, Lancaster Co., S. C.
J. G. Taylor, Austin, Travis Co., Texas.
J. H. Burrage, Concord, Cabarrus Co., N. C.
Fischer & Stehle, Marietta, Washington Co., O.

Black and Hybrid Queens.

I expect to have, some time in May, ten or twelve black queens. If you would like to purchase them you may have them at whatever figure you name.
R. MALLALIEU.
Hopewell, Bedford Co., Pa., April 23, 1881.

I have about a dozen hybrid queens for sale at $1.00 each. OTTO KLEINOW.
Detroit, Mich., (opp. Fort Wayne.)

I do not make a business of queen-rearing, but have a few blacks that I would dispose of at 35c, and if you will tell me how to put up bees, I can let 1 lb. or more go with queens if wanted at $1.00 per lb.
J. J. DAVIDSON.
Grand Bay, Alabama, April 8, 1881.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Michigan,

would be pleased, upon request, to send you his circular and price list (printed on the cheirograph) of Italian queens and bee "fixin's." 4tfd

SEND for my circular and price list of Italian Colonies, Queens, and Apiarian Supplies.
5tfd H. H. BROWN, Light Street, Columbia Co., Pa.

ITALIAN QUEENS! I am prepared to furnish pure queens at a low price. Untested, in May, $1.00; June, 90c; after, 80c. Send for circular.
CHARLES D. DUVALL,
4-9d Spencerville, Mont. Co., Md.

An Italian Queen

FOR 15 CENTS.

We guarantee to every one who sends a dollar for the *American Bee-Keeper*, to send a pure untested Italian queen for 15 cents more.
4-7d E. M. HARRISON, Lebanon, Laclede Co., Mo.

PURE STOCK! I shall devote the coming season to rearing *HOLY-LAND QUEENS* for sale. They will be reared in an apiary by themselves, away from other bees. The price will be as follows:—

Dollar Queens, before June 15,	$1 25
Each, after that date,	1 00
Tested Queens, after June, each	2 50

Safe arrival and satisfaction guaranteed.
3-8d I. R. GOOD, Nappanee, Elkhart Co., Ind.

VANDEVOORT FOUNDATION!

Ten square feet per pound. This foundation took the prize over all others for use in surplus boxes at the N. E. B. K. Convention. Send for samples.
5-6d G. W. STANLEY, Wyoming, Wyoming Co., N.Y.

COMB FOUNDATION MACHINES

FROM $1.00 TO $5.00.

Comb fdn. from 33 to 40 cts. Italian Queens from imported mothers, Untested, $1.00; Tested, $2.00; 50 now ready. Fountain Box, to run the wax right on the plates, without spilling a drop. Send for my new circular.
JOHN FARIS,
5tfd Chilhowie, Smythe Co., Va.

WANTED!

A four or five horse-power engine and boiler. If to be bought at a bargain, must be in good condition, and in running order. Description required.
O. H. TOWNSEND,
5d Hubbardston, Ionia Co., Mich.

HIVES, SECTIONS, AND BOXES

Material for Langstroth Hives, including Brood-Frame, 40 cts. each; Lewis V-shaped groove One-Piece Section, any size to 6x6, $5.00 per 1000. Lewis One-Piece Honey-Boxes, all sizes, $2.00 to $4.00 per 100, including glass; Dovetailed Sections, any size to 6x6, $4.00 per 1000. Manufacturing experience of 20 years. Send for Price List.

G. B. LEWIS (Successor to Lewis & Parks),
Watertown, Wis., April 1, 1881.

N. B.—There is *no patent* on the Lewis One-Piece Section. 4tf

---

GUARANTEED

Italian Queens!

I guarantee all my queens to be purely mated from imported mother. Safe arrival and satisfaction guaranteed. Send for circular. Untested Queens in May and June, $1.50. July and after, $1.00. Tested Queens, May and June, $2.50. July and after, $2.00. Select tested, $3.50.

Address— L. C. M'FATRIDGE, M. D.,
2-7d Carroll, Carroll Co., Ind.

Before Purchasing

any Italian or Cyprian bees, send for our 20th annual price list. Full colonies, Nuclei and Queens, at greatly reduced prices. Also headquarters for Apiarian supplies in New England.

WM. W. CARY & SON (formerly Wm. W. Cary),
3tfinq Colerain, Franklin Co., Mass.

IMPROVED

Langstroth Hives.

Supplies for the Apiary. Comb Foundation a specialty. Being able to procure lumber cheap, I can furnish Hives and Sections very cheap. Send for a circular. A. D. BENHAM,
2tfd Olivet, Eaton Co., Mich.

NOW READY!

Our new circular and price list for 1881. We have something new for every bee-keeper. Remember, we are largely engaged in practical bee-keeping, and know what supplies of are most value in the apiary. You should see a description of our feeder. You will want one. Our new **Double-Draft Smoker** is perfection. See what one of the most practical and best-informed bee-keepers of the country thinks of it:—

"Since your great improvement in smokers, as regards to the double blast, you undoubtedly have the inside track of all the others in the market. This, with the superior workmanship and materials used, should place your smoker at the head of the list, and secure for it a favorable patronage for 1881."

G. M. DOOLITTLE.

Price of smokers: By mail, $1.50 and $1.75.
Our book,

QUINBY'S NEW BEE-KEEPING,

is pronounced the most practical work published. Price, by mail, $1.50. We furnish every thing used in advanced Bee-culture. Send for illustrated circular. L. C. ROOT & BRO.
Mohawk, Herkimer Co., N. Y. 4tfd

PURE BRED POULTRY.

I am now prepared to fill orders for eggs from the following: P. Rocks (Corbin strain), L. Brahmas, S. S. Hamburgs, S. S. Polish (Bearded), Brown Leghorns, W. C. B. Polands, Rouen and Pekin Ducks, Toulouse Geese and Bronze Turkeys. Eggs packed in the most approved manner. Poultry for sale in the fall. Send for Price List. Address
4-6 H. S. ROSS, Box 128, Seville, Medina Co., Ohio.

1881 ITALIAN BEES AND QUEENS FOR SALE, and Bees by the pound a specialty, cheap as can be and live. Address
A. W. CHENEY,
5 Kanawha Falls, Fayette Co., West Va.

BEE-KEEPER'S SUPPLIES!

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Will take bees in exchange

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Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new circular. Address
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1881 ITALIAN QUEENS! 1881

Tested Queens........$1 50
Warranted Queens.. 1 00
Cyprian Queens, untested 1 00

As most all the Dollar queens I sold last year were pure, I will warrant them this year.

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Vandevoort Comb Foundation

took the premium over Flat Bottom, Dunham, and all other makes at the N. E. Bee-Keepers' Association at Utica, Feb., 1881.

Price of foundation made on same machine,

1 to 25 lbs., for Section Boxes,.................. 55c
25 to 100 " " " " 50c
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FOR SALE! Pure bred Pekin Duck eggs, for hatching. Packed securely and delivered at express-office on receipt of price, $2.00 per eleven.

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MAKE BEES PAY

By introducing the best strains, tested for excellence. My imported queen of '79, *picked* from Root's *best grade*, still reigns with power.—Queens from her:—Tested, $2.50; untested, $1.00. After July 1st, tested, $1.50; untested, 75c. Same warranted pure, $1.00. Mailed safely, free. My drones are best pure stock. Full colonies of bees, $8.00. Nuclei, 2-frame, $2.00. USE MOLDED FDN.; it needs no wire, will not sag, and *pays big*. Price, 40c. My new machine, $5.00; outfit, $10.00. Any size made to order. Satisfaction guaranteed. Send for circular, and *keep posted*. OLIVER FOSTER,
4tfd Mt. Vernon, Linn Co., Iowa.

At Kansas City, Mo.,

I breed pure *Italian* and *Cyprian* bees for sale. I warrant my "Dollar" queens to be mated by pure yellow drones, and guarantee safe arrival and perfect satisfaction.

Tested Queens,	in	May	$3 00
" "	in	June	2 50
" "	after	"	2 00
"Dollar" "	in	May	1 50
" "	in	June	1 25
" "	after	"	1 00

Bees, per lb., same prices as Dollar queens.
Please address all letters plainly to
3-5d E. M. HAYHURST, *P. O. Box* 1131.

KIND WORDS FROM OUR CUSTOMERS.

The smoker came all right. I like it first rate; think it is the boss. Away goes the tobacco for good.
Sandwich, Ill., April 25, 1881. G. M. TREAT.

I guess all the goods ordered have been sent and received. The dictionary is very nice; saws work nice. N. A. SAUNDERS.
Hudson, Mich., April 19, 1881.

The putty-knife is the handiest thing I have about the apiary. JOHN C. GILLILAND.
Bloomfield, Ind., March 14, 1881.

I have just received the 15-cent dictionary. It is a "bouncer" for the price, sure. ROB'T QUINN.
Shellsburg, Benton Co., Iowa, April 15, 1881.

I hardly see how you can sell envelopes so cheap. I pay more here for envelopes without printing.
Winfield, Mich., April 9, 1881. LEE S. COBB.

I have received my two dictionaries. 1 memorandum-book, 1 dinner-horn, and one rule—very nice things for the price — wonderful for the money. Please accept thanks. DAVID SCHWARTZ.
Berne, Adams Co., Ind., April 18, 1881.

I like your book best. I would not be without the A B C, after having once seen it. It looks as if a child might manage the bees after studying it.
MRS. FRED BETHE.
Abilene, Kan., March 17, 1881.

Please find inclosed $1.00 for the A B C book you so kindly intrusted me with. I am well pleased with it. I think it would be well for every bee-keeper to have one. I would not take a $5.00 gold-piece for it if I could not get another one to fill its place. WM. ASTRY.
Franklin Square, Col. Co., O., March 15, 1881.

A KIND WORD FOR THE RAILROAD COMPANIES.

The extractor arrived this morning in good condition. Those whose hands it passed through in so long a journey certainly deserve a great deal of credit. Fruit and forest trees are in bloom. Bees busy, drones flying, and—now for business.
Mason, Mason Co., Tex., Mar. 7, '81. M. C. SWAN.

I received the two little knives yesterday O. K. One pleases the lady at the sewing-machine and work basket; the other, the little sister with her pencils at school. We think it so funny to receive things of all sorts by mail, besides letters, that I think I must keep a deposit there. A. W. BRYAN.
Gadsden, Etowah Co., Ala., April 5, 1881.

As it is rather dull without GLEANINGS, I thought I would drop you a line with a dollar inclosed. Please send from the first of the year, if you can; if not, a year from now. My husband is away, and I want to happily surprise him when he comes home, with GLEANINGS. F. P. DUTTON.
Cob Moo Sa, Oceana Co., Mich.

I have sometimes in life shed tears when angry; again when grieved; but a feeling of sorrow followed. On reading Our Homes in your paper I have shed many tears, but they were tears of joy. I keep no bees. Nearly 50 years ago I rambled through the woods in Medina. I am now 72 years old. Inclosed please find $1.00 for GLEANINGS. LUCIUS BEACH.
Port Huron, Mich., March 10, 1881.

If Merrybanks and John have never *hit* others they have me, and have taught me, too, more than one serious lesson. Severe dignity and intense respectability have been the death of numberless papers and journals, while the homely, sincere, earnest periodical that tells of the ups and downs of real life, as people live, prospers, for, they are always welcome visitors. L. M. SHUMAKER.
Danville, Va., April 20, 1881.

A B C book came to hand all right. One item in it was worth more than the cost to me already. I had been reading about Simpson honey-plants all winter; had made up my mind to invest $2.00 hard earnings, and A B C let out the right name, "Carpenter's Square." Just any amount all around here. I have seen it in several States, but it grows larger here. To-day I picked up some old stalks 1¼ in. square, and nearly 10 ft. long. W. T. KITTER.
Lincoln, Ill., April 19, 1881.

Every article that I sent to you for arrived here promptly, and gives entire satisfaction. The magnifying-glass will help me to look for eggs in the comb, as I can not see them without glasses of some kind; and the smoker, I do not know; it may not be so good as some others, but I would not take double the money paid for it and be without it one week, which is just the time from writing to you for it and the time that it arrived here. With it I can tame bees that are as fierce as Bengal tigers.
Rocheport, Mo., Apr. 10, 1881. THOS. CHAPMAN.

[Our friend S. Young, who wrote us last month that he had given way to temptation, and got to using tobacco again, has made a fresh start, and on a better basis I trust. I have heretofore been unable to get him to attend the Sunday-school near him; see what a start he has taken now:]—

Mr. Wilson and myself went to meeting to-day, and we had as happy a time as I ever had. We went early, and had to go into the Bible-class the first thing, and you can bet we stood up to the rack, read in the Bible, answered all the questions that were asked us, and we intend to go again. I think I shall work at the blacksmith trade from this on. My kind respects to you and all the shop hands.
SAMUEL YOUNG.
Chatham Center, Ohio, March 23, 1881.

[To be sure, you were happy, friend Samuel. Now do not let Satan coax you off the track any more, but stick right to that Bible-class, and, my word for it, you will be one of the strong pillars in a very little time. Both you and your friend want to go early and "stand right up to the rack," every Sunday. You have hit the nail right square on the head, and may the Lord bless and prosper you in that blacksmith shop!]

MAN PROPOSES, BUT GOD DISPOSES.

[If our friends will look at pp. 141 and 144, of March number, and then read the following letter, they will see that I have been the innocent victim of a huge "joak;" but for all that, God seems to have taken the matter in hand, and I hope, trust, and pray it may result in a huge Sunday-school. Read:]

Now, friend Root, many thanks for your advice, and I will try not to let a swarm go. But I must have your help until the first of August; and now, with the Lord's permission, I shall try my best.

Bees have wintered first rate, and every thing looks as if we should have a good honey crop.

You make me say, on page 144 of GLEANINGS for March, "I never could get used to getting along without it," when I meant to say that "I never could get *used* to it." I sent to you, thinking I should receive a smoker, and you have sent me two; but I have sold one, and it is all right. You think tobacco must be very high, $1.00 per lb.; well, I know that if honey were one-fourth as high, it would be very nice.

Now for the Sunday-school. I have 21 names, but have not had time to see them all. I think there will be 27 or 28 in all. I have said to them that it is to be free to all who will come. You must send me the rule that you wish me to go by.

I have always had to use tobacco with my bees, as I could not find any thing that would subdue them; but I was thinking that I should have to give them up, as the use of tobacco was hurtful to me.
CHARLES P. BALLOW.
Half Moon Bay, Cal., Feb. 15, 1881.

[To be sure, you are to tell them all to come, friend B. A Sunday-school that was not free to every human being, high, low, rich or poor, I would not give much for. Invite them in that way, and after they get there, treat them in that way; and if every one who goes and helps that school along has not reason to feel that God has sent them an especial blessing, just set me down as lacking in wisdom. I will at once send you a simple outfit to start with, and you can pay me for it whenever you get contributions enough. Now, friends, let us pray for friend Ballow and that Sunday-school, away off there in California, started under such a queer combination of circumstances. Why, that extra smoker must have been a providence, for I have no sort of an idea how it came to be sent. Give the money you got for it to that Sunday-school.]

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES AND HONEY, AND HOME INTERESTS.

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A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.
Established in 1873.

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NOTES FROM THE BANNER APIARY.

No. 18.

MY "REVISED" REPORT FOR 1880; HOW THE COLD WEATHER SHRANK THE "FIGGERS."

WE have been having a "spell" of cold weather, for this time of the year, but this 7th day of April it is warm enough for me to sit out in the sunshine, upon the wheelbarrow, and compose this article, scribbling it down in phonography upon a scrap of paper, while I keep an eye on the "twins," and see that they don't run into the mud.

I suppose, by good rights, that the Banner Apiary ought to be draped in mourning, the flags hung at half mast, and its owner consigned to "Blasted Hopes;" but as it is, there are three colonies (I had eleven last fall) holding the fort (yes, and two of these were bought this spring of a neighbor whose apiary I Italianized two years ago) while their owner is "poking" about the country, buying bees of his more fortunate neighbors, and empty combs of his *less* fortunate neighbors. (It's an "awful" good spring to buy empty combs.)

How did I lose my bees? Well, I'll tell you the best I know how. In the first place, I "felt it in my bones" that we were going to have a hard winter on bees, so I sold 18 colonies, all that I had except four swarms, and these were in my tenement hive. They were made up very strong, and had plenty of honey; but they acted very much as did friend Good's bees in his tenement hives; they would not quiet down as sensible bees ought to, but kept "tearing around," if I may be allowed the expression, and eating lots of honey. When it was real cold weather, so cold that bees could not fly, there would often be two quarts of bees *hanging out* at each entrance. In January they commenced to have the dysentery, and then they "just went." I do not feel like blaming the tenement hive for my loss, as friend York, who lives a few miles from here, wintered 30 colonies in tenement hives, losing only three swarms.

Late in the season I had an opportunity to trade, with two different parties, and get some black bees at a bargain. There were three swarms at one place and four at another. The men of whom I obtained the bees had always wintered their bees with little or no protection; one had never met with very heavy losses, and the other had never lost a swarm; so I concluded to risk these bees without protection, *just this once.* (There, I couldn't keep the "little chicks" out of the mud without chasing them most of the time, so they *had* to go into the house, and I have found a more comfortable seat in the shop-door.) Three of the swarms that I had away from home were in two-story Simplicity hives, were *very* strong in numbers, and had plenty of honey. I saw them in January, and they were so strong then that I thought they would surely go through. In February there was a thaw, and a few days later I was informed that my bees were dead. When I moved the hives home, then I discovered the trouble. The bees had moved into the upper story to winter, and the dead bees had accumulated upon the tops of the frames in the lower story, and *shut the bees in.* There was nothing over the frames, and the bees had tried to get out through the crack where the cover joins the hive. There was a big ring of bees clear around the inside of the hive close up to this crack. It seemed as though they had died struggling for freedom. I thought, "Oh if I had only brought my bees home, where I could have seen to them!"

Two other swarms that were away from home *starved,* even if they did go into winter-quarters with 30 lbs. of honey. Another was so weak that I put it in with another swarm. The swarm that came through all right was in a double-wall hive, no chaff, but just a dead-air space.

It sometimes fairly makes my head "swim" when I think of all the articles that I have read this spring upon the subject of wintering bees. One says, winter the bees in a cellar, and have the cellar *dry;* another says the same, only you must have the air *damp.* One says, "Give your bees water while in the cellar;" another says, "Don't." One says, "Leave the bees out of doors, and give them protection;" another says, "Raise the hives upon blocks, so that they can have plenty of air;" and the Dickens of it is, bees have been wintered successfully with all of these different methods. There are two things, however, upon which most of us agree, and that is, in having plenty of young bees and plenty of good stores. I don't think the white-sugar diet for winter has been tried as much as it ought to have been. At present, I feel very much like following Doolittle in one respect, and that is, to put part of my bees in a cellar, and leave part of them out of doors.

Am I discouraged? Oh, no! not in the least. I am buying more bees, and shall probably do a larger business the coming season than ever before.

Rogersville, Mich. W. Z. HUTCHINSON.

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OUR OWN APIARY.

MY FRIENDS, to-day is the 13th of April, and all that remains of our apiary of 300 colonies last fall, is 7 fair stocks and 11 nuclei. Of course, we sold a great many in the fall, and the rest were doubled down to about 140, just before that cold spell in November. All were in chaff hives, and well protected, but they were not nearly as strong as I knew they should be to stand a hard winter. I have explained before that the unexpected cold weather prevented our selling our usual number of queens in Oct. and Nov., and so we had the choice of killing valuable queens or running the risk of being able to winter them, as we had previous seasons. The 11 nuclei we have taken out of the chaff hives, and set into 3-frame nucleus hives, covered with wire-cloth at the top and bottom, and have set them in the engine-room, to preserve the queens, if we can, until we have a day warm enough for them to fly. I have also bought 80 colonies of neighbor Rice, who has wintered his all right in the cellar (he did not raise any queens for sale, you know), and I shall probably purchase a great many more. The outlook is sad, I know, from reports. It is very sad to many of you, who feel as if you had not the means to buy more bees to cover your combs before the moth may take possession of them. Still further, what is the use of buying more when we get so little honey, and then lose them almost every winter?

I see, by the letters, that some of the friends are almost inclined to repine at a kind Providence, and to doubt whether God's hand is really in it at all. Suppose, for instance, that every day's work was a success, and that the weather was always propitious. Would constant sunshine and favorable weather contribute more toward making man grow strong and self-reliant, than the average amount of difficulties that one meets in the usual duties of life? Does it make a boy grow into a great and good man by giving him every thing he wants, without asking him to work and strive for it? Surely God knows; and he watches not only anxiously, but even lovingly over us, his children, and he most assuredly will cause every thing to work together for our good, if we only love him and look up to him for help through it all.

In 1868 I lost all my bees but 11 colonies, and as everybody else, almost, was about to give it up, I felt very much like giving it up too, as my friends urged. I did not, though, but went quietly to work and built the 11 up to 48, and wintered them all, as I have told you in the A B C. From the 48, I took, the next season, 6162 lbs. of honey, and sold it all at a large price. Suppose, now, I had given up. GLEANINGS would never had been started, the A B C book would never have been written, and the world, in all probability, would have been considerably poorer in health, honey, and happiness. It is true, many thorns have come with the roses; but none of us would have enjoyed our favorite pursuit as we do now if it had not been for these failures. You can never feel the keen enjoyment that comes from success until reverses have taught you how much success costs. The reverses have stimulated us and given us an energy to work and study and learn, that success alone never could have done. God knows best. I have long been thinking of a plan whereby we might raise bees out of season, or, if you please, independently of the weather and untoward seasons, as many of you have gathered, by my experiments with manure-heaps, artificial heat, the greenhouse, etc., in the years that are past. Well, I have felt pretty sure, for some time, that the matter could be managed with the light we have now, were I not too lazy or negligent to set really about it. Well, this spring's disasters have stirred me up to the point, I think, and I feel now just like going into it in real earnest. Even if we do raise queens, and reduce the strength and vigor of our bees, I feel sure that it is in our power to raise more, and build them up at any season of the year, if we will only take the trouble. I can raise plants in our greenhouse of almost any description, and keep them going all winter long, not only as well as they can be raised out of doors, but a great deal better; for by keeping off cold winds, and scorching suns, and giving plenty of water, I can produce a growth that is hardly ever seen in the open air. For about a week I have had a colony that was almost at the point of death, in the greenhouse. Although their entrance opens right out of doors, none of the bees try to go out in unseasonable weather, and since they have got accustomed to their home, I have kept the entrance closed, except when the weather was fit for them to fly. The steady warm temperature seems to have restored them to perfect health, and the queen has been laying so finely, that I have taken the whole 11 weak ones that would have surely died outdoors, even in the chaff hives, and put them indoors too. As soon as it is really warm, I shall take them back to their hives again. As they emitted the usual bad smell of bees with the dysentery when first brought in, I placed each one in a three-frame nucleus hive, having wire cloth over both top and bottom, and then place them up from the floor, so the warm air of the room could have a full circulation right through them and the combs. They have been there 48 hours, and, although confined, the bad smell has nearly left them.

Now a word about giving up. Every time you give up and retreat, you weaken your faith in yourself; and if you are not careful, you also weaken your faith in God. Every time you pull through and conquer, you gain confidence in your powers, and are much better able to surmount the next obstacle. You are, perhaps, well aware that many of our large York State bee-men use a stove or furnace in their bee-rooms during the severest part of the weather. Their bees do not fly, either. In L. C. Root's *Quinby's New Bee-Keeping* you will notice that great stress is laid upon the necessity of artificial heat where bees are wintered in cellars during very severe winters; and Quinby's point, that the most successful cellar wintering is in cellars directly under the kitchen stove, during severe winters, is one well worthy of being looked up now, since the past winter's losses.

April 19.—To-day our few stocks are (the strongest of them) bringing in natural pollen. They seem to have very little ambition to start brood-rearing, as yet, but the new pollen will doubtless give them ambition. I am inclined to agree with the brother in the South, who said that even feeding would not work this spring. Neighbor Clark has wintered 9 without losing any, and neighbor H. has over a hundred yet, and some of them quite strong. I have purchased, of neighbor Rice, 80 colonies, to be delivered any time I think best. These will be at once divided, as they will bear it, and we shall soon have our apiary alive again, with the aid of abundance of combs and stores. The following is from friend Doolittle, so it would seem that the queen-rearing apiaries are not the only sad ones after all.

Bees are dying fearfully here at present. My loss will exceed 40 per cent. Snowing hard to-day from the N. E., with ground frozen nearly solid. No particular plan of wintering seems to be exempt, as losses are reported with all modes. Cellar wintering and chaff packing prove the best, yet much loss has occurred with these. Yours in haste,—

Borodino, N. Y., April 12, '81. G. M. DOOLITTLE.

April 22.—We are having beautiful weather now, and the soft-maples are in bloom, but the bees refuse to be comforted, and the weaker will not repel robbers in spite of any thing we can do. Our number is now down to 12, but friend Rice is to bring us ten colonies this afternoon, that we may save some of our valuable queens. We have perhaps five colonies that will pull through without help. Here is another letter from Doolittle. I am thinking about building a bee-cellar, to put half of our stock in next winter.

Bees are suffering badly now, as we have had a week of snug winter weather, which is hard on weak swarms. Had not some of those fellows who shouted "bees all right" the fore part of March, better waited till the first of May? We aren't through the woods before May 15th in this locality. If this weather keeps on long I shall lose half of my bees that were wintered on summer stands packed in chaff. Those in cellar are doing much better. Reports of losses come in thicker and faster from all through the North, and the end is not yet. Tell W. Z. Hutchinson that he has defended his position on late queen-rearing admirably, and as any thing further would be uninteresting to your readers, we will let it drop. G. M. DOOLITTLE.

Borodino, N. Y., April 8, 1881.

26*th*.—We have had a week of glorious weather, and the 12 remaining colonies are every one of them coming up, although some of them slowly. The 10 colonies purchased of neighbor Rice are doing beautifully, and, what is queerest, are storing new honey and building new combs from the soft-maples. I do really believe that, if this weather continues, the bee-keepers of our land, as a whole, will make a very creditable season of it after all. One point begins to impress itself strongly on my mind: God in his wisdom is throwing the Northern brethren on the mercies, as it were, of our friends in the South. They, and they alone, can help us out of our straits, by furnishing bees by the pound to replenish the destitute hives in the North. Gird up your loins, ye men and women of the South, and help us. To further this new industry, I will give, gratis, for the month of June, the names of all who will furnish bees at our list prices. Now, be not backward or faint-hearted, but turn in and give it a trial, even if you do fear you won't pay expenses. Here is a card from friend Gates, that tells the kind of a story we want to hear:—

I will try furnishing bees to your customers, and guarantee safe delivery, to the amount of five pounds per day, and am willing, in fact prefer, for you to fix the price. I have forty-seven stands, but part of them are blacks and hybrids. We have had only one day so far that the index has shown a gain, and then one pound; raining now. Please send me word how much weight of Viallon's candy to use per pound of bees per day to destination. I will try some bees to you early next week. I want an imported queen, if able. G. W. GATES.

Bartlett, Tenn., April 23, 1881.

As nearly as I can make out, 1 lb. of bees will need 1 lb. of candy about every 10 days. I rather think you will have to give them water in the tin water-bottles I described to you last season. Perhaps you would do better to have us send you by mail one of our cages all fixed for a pound of bees, and then you will know just how to go to work to make them. If you want me to set the price of bees, mixed Italians, blacks, and hybrids, I would say $1.50 per lb. for this month of May,—you to guarantee safe delivery of a full pound of live bees, but your customers to pay all express charges. Now, friend G., if you do not make some money, and do a great deal of good besides, it will be your own fault. Boys, send him your orders.

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GEO. GRIMM'S REPORT.

EUREKA! The danger is over. I again breathe freely, now that I know the result. And what do you think it is? Good, beyond my expectations. I can speak now with certainty, for I have this day completed my round trip of examination. My bees were wintered in three different cellars; 221 in my home cellar, and 105 each in two other cellars, situated five and ten miles from home; a sum total of 431 colonies. Those in my home cellar were placed on their summer stands April 16th, and those in the outside cellars April 19th. Of those at home, 14 were dead when I removed them from the cellar; of the other two lots, 10 and 11 were dead respectively, making a total loss of 35 colonies out of 431 wintered in, or about 8⅛ per cent; since then I have lost one and doubled up three, which makes the loss about 9½ per cent. It will not reach

10 per cent, as I had expected. Immediately after removing them from the cellar I examined them carefully. I found them even in *better* condition as to bees than they usually are when removed from the cellar, but having little or no brood. They have been in the cellar 5½ months, and have consumed from 10 to 13 lbs. of honey, according to the size of the swarm. Those that were in good condition, and had sufficient honey for the present I did not disturb, but allowed them to clean out their own hives, which work they have by this time nearly completed; those that were weak I transferred into clean hives, and strengthened up with bees got from another apiary; and those that were short up for honey I feed sufficient to last them for several weeks. I found several that were queenless, and supplied them with queens taken from hives that I had counted dead, but a few of which had the queen and about a dozen bees left. I may possibly lose one or two more, but think not, as all the poor ones have been well strengthened up, and brood-rearing has generally begun. Yesterday I fed some rye flour, as many were short of pollen; but to-day it was unnecessary, as they brought both honey and pollen from soft-maple, which are just beginning to blossom.

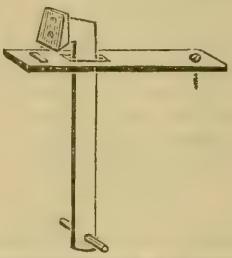
And now I will take the liberty to say a few words upon the much-discussed subject of "wintering bees." But hold! I forgot to state that, in my chaff-hive apiary (consisting of one colony), I lost 100 per cent. The question, "How can I winter my bees successfully in both mild and severe winters?" has lately gained in importance with a great many readers. As far as concerns myself, I have solved it. The thought of winter as connected with bees has lost its dread with me. Many different theories have been advanced, experiment after experiment made; the novice has hastily adopted every plan that seemed feasible, and usually abandoned it after the first trial. Cellar wintering and chaff packing at present lay the largest claims to success. This winter has been a severe trial for both, and tested well the soundness of their respective claims; and I believe that, for this climate, cellar wintering wears the laurel wreath. That a great many bees were lost in cellar this winter does not disprove the fact that bees can be wintered there successfully every winter. The experience of our veterans in bee culture is a better guide than the little-sought-after and gratuitous advice of our novices. Compare the success of masters in the profession that winter in cellars with the success of masters in the profession that winter by chaff packing or any other way, if you wish to arrive at the truth. Remember this in all cases. If you compare the success of the former with that of the latter for the last five years you will become convinced that bees can be wintered in cellar with almost perfect success *every* winter, and that they can not in any other known way. The reason why so many failed is simply because all details had not properly been attended to, all conditions had not been complied with. One thing more: It has been stated that bees wintered in cellar are less hardy and more subject to spring dwindling than those wintered out of doors. I dispute this; my experience has led to no such conclusion. Immediate, proper, and continued attention from the time of their first flight to the time when they begin to work will prevent all loss in spring. Cleaning, strengthening, equalizing, feeding, guarding against robbers, should be the order of the day. If this rule is closely followed, the complaint of many bee-keepers, that they lose more bees in spring than in winter, will cease. GEO. GRIMM.

Jefferson, Wis., April 23, 1881.

Many thanks, friend Grimm. Your points are excellent, and I agree with you, that careful cellar wintering is, on the whole, the safest, in the long run. I have felt anxious to know whether you consider artificial heat, in connection with cellar wintering, so very important as our friend L. C. Root seems to consider it in his book. If I gather correctly from your article in our March No., I believe you do not.

A NEW STARTER MACHINE.

WHEN you published a cut of Parker's little machine for pressing in starters it came in my mind that it would be better to work it by foot, and have both hands free to handle sections. I therefore made one and used it last year with much satisfaction. I inclose a drawing of it. It is made of ⅞ pine, except the presser-block, which is hard wood with rounded edge, which dips down occasionally into the V-shaped cut in the end of the board which contains honey. Some small pieces of wood are tacked on each side as guides for the sections; the horizontal piece is fastened by one screw to the table, with the end projecting over enough to work the lever by placing the foot on the pin at the bottom. A 3-16 or ¼ inch wire is sufficient to put through on which to hang the lever.



CLARK'S STARTER MACHINE.

Sterling, Ill., April 20, 1881. NORMAN CLARK.

Many thanks, friend Clark. Your machine is quite ingenious, and where one has a great many starters to put in, it will doubtless be quite an acquisition. We formerly used a similar one, as you may remember, for putting in whole sheets. This machine was illustrated in one of our former volumes.

CIRCULARS AND PRICE LISTS RECEIVED.

C. K. Bennitt, Whitmore Lake, Mich., sends us a 1-page circular of hives, frames, etc.

Wm. Ballantine & Son, Sago, O., issue a 1-page circular and price list of Italian bees.

S. D. Buell, Union City, Mich., has sent us a 12-page circular of apiarian fixtures.

J. V. Caldwell, Cambridge, Ill., sends out a postal circular and price list of bees and queens.

H. H. Brown, Light Street, Pa , sends us a 12-page price list of things needed in the apiary.

B. S. Underhill, Williamson, Wayne Co., N. Y., sends us an 8-page circular of supplies for the apiary.

G. M. Wetherbee, San Francisco, Cal., sends a neat postal price list of bee materials.

D. A. Pike, Smithsburg, Md., sends us a 4-page circular of Italian queens and bees.

APIS DORSATA.

FURTHER PARTICULARS IN REGARD TO THE "CHASE" AFTER THE WONDERFUL BEES.

AS friend Jones' letter that accompanies friend Benton's letter is quite interesting we give that also.

Friend Root:—I send you another very interesting letter from Mr. Benton, and it seems that these wonderful bees are creating great excitement in the bee world. I have come to the conclusion that they may be valuable, even though we lose some of them in wintering (some thing I do not anticipate). Could we not extract the stings from the dead ones, and sell them for toothpicks?

I will be able in your next, I hope, to give your readers full particulars of this wonderful bee, and all about Mr. Benton's future movements. In the mean time, I will say that he has been instructed to bring several hundred queens from Cyprus and Palestine,—principally Holy-Land queens, and after recruiting his bees from Java, Ceylon, and other places, he will bring them with all his Holy-Land and Cyprians by the quickest route he can to Liverpool; fly and prepare them there, and forward them on to me, and I will meet them when they land, and he will return back for more and further researches. I will give you more full particulars in future, as it appears from his last letters that he has not got some of my instructions sent him there, but I hope he will, as they are very important. I have cabled him, which is very expensive. Yours faithfully,—

D. A. JONES.

Here is what Frank himself says :—

BATAVIA, Java, Feb. 14, 1881.

Dear Mr. Jones:—I arrived here with hives all O.K., though some are weak. I will try to save them all. I have, after much work, finally got on the right track and on the right side of some of these Dutch officials, and fully expect to sell the lot of hives—as many as I can put in order—at £5 each. I thought Ceylon a pretty hard place to accomplish any thing in—much harder than Cyprus or Palestine; but it is not a circumstance. There are *no* interpreters here—no natives can speak English, German, or French, and only those who have fine government positions can speak Dutch. Having gotten hold of some good men now, I think I will get help to secure wild bees; but since they have, *every one of them*, to be gotten from the forest, to be hunted as yet, and then secured, I do not believe I can get a large number; but I think I shall not meet with losses on the return. Yours in haste,— BENTON.

BENTENYORG, Java, Feb. 15, 1881.

Friend Jones:—I scribbled this note yesterday with a pencil, but came away without mailing it in Batavia. The matter of selling the bees is more certain now. I brought them a day or two ago to this place by rail, and am fixing them up as best I can; and as soon as the sale is completed will remove them to the Government Agricultural School, which is near the hotel where I am stopping. The queens are all right, but in some hives there are but a handful of bees, and in the strongest only three combs. They are brood rearing, and I shall keep it up by feeding all they will take, and equalizing brood. Then I will leave instructions about continued feeding. The Government wants to make a thorough test of the matter of introducing European bees here. The bees Mr. Rykens took from Europe, 24 hives, nearly all died before he reached Port Said. Five colonies in very weak condition arrived here, and have since gone up. Mr. Rykens is now in Europe, sick; but they expect him to return some time. The head of the Government Department of Agriculture has instructed one of the officers of the Government Agr'l School here to furnish me aid in securing some of the wild bees, *apis dorsata;* so as soon as I have gotten the hives I bought in fair shape I will start out after them. I have not yet seen a bee of this race, but have seen two combs of these bees, which are three feet by three and a half feet, and are 1½ in. thick where brood was reared; 20 cells, about, to the square inch. Bees must be ⅞ of an inch long. The combs are *never* built horizontally—could not be, but are perpendicularly placed on the branches of trees. The natives get the honey and wax from them, although I was told this morning by a gentleman who has been here for 50 years, that they "sting fearfully." Of course, too much dependence must not be placed upon such a statement. Many who are not bee-keepers would say the same of our honey-bees.

I can not now tell exactly how much money I will have when I get back to Cyprus, for I do not know what I must pay out yet. The very cheapest management I can adopt is still costly. Every move made by an American or European costs "like sixty" here. There is no choice; the money must be "forked over" or *nothing* can be done. They bleed everybody who comes, else he goes away without having accomplished any thing. I hope to leave here March 4th for Singapore, and take the steamer, which should meet me there for Ceylon. I have promised to arrange the bees I have left there, some hives of which are now in Point de Galle, and for which I was to be paid on their delivery in Colombo. Then I expect to get colonies of *apis dorsata* there, now that I have learned more of the matter, and know where they are actually plentiful.

From Ceylon I will sail about March the 27th, arriving in Port Said about April 13th; then Cyprus, as soon as possible; thereafter, where I expect to receive further instructions as to future operations.

FRANK BENTON.

BOX HIVES.

WHAT HEDDON SAYS OF THEM.

SEVERAL years ago I proposed to run an apiary on the box-hive system. Novice at once made a department for me, and any other old fogies who might still adhere to such old notions. When I made the proposition, that if any one would purchase my present apiary I would commence a box-hive apiary and would start with box hives and black bees, I expected to soon write an explanation of the style of box hives. What first moved me to make such a proposition was, that I had just visited the Bingham apiary and found the only hive of any merit that I had ever seen, that did *not* embrace the Langstroth principle. The box hive, as you all know, was a hive made of frames whose ends were tight-fitting. Just before my article above referred to was written, Novice called this same plan "a box hive." Well, I thought if that was a box hive, surely a box 6 inches deep, 24 long, and 11½ wide, would be also. In a box of that kind, I proposed to put eight movable top-bars, to which the bees would attach their combs, also three or four inches down the end of the hive. On these bars we set our boxes (on a honey-board), and when we had them placed, covered all with a cap. When our practiced eye said, "Some thing is wrong with that colony," we proposed to whop it on its back, and look to the top of the shallow concern, and cut out or insert queen-cells if necessary. In cases where the combs *must come out*, slide our long knife along the ends of the hive, and sever the connection, and whop it back, and remove the combs the same as with frames. Well, for some cause or other I did not write the description, and visions of old rough boards, 1¼ in. thick, nailed up about 20 in. high, with grain running up and down, were indulged in by our readers all over the country. The advantages of these modern box hives were that they were Simplicity-er, cheaper, a good thing to go after a swarm with, much quicker manipulated where the combs were not necessarily to come out, and, though not such good educators, a good thing for well-learned bee-keepers, whose business was honey-producing on a large scale. But for reasons that I am about to mention, I would be using them to-day.

You will recollect that at that time comb foundation was a thing of doubt among the masses, especially the practical producers. We were then testing it, and the lots that we could get were either cheapened with paraffine or ceresin, or else beautified by bleaching the wax. All of these compounds, when made into fdn., were failures. But since we have got comb foundation that the bees draw to honey-comb (full brooding depth) in 24 hours, we need a frame to put it in; and why? because it cannot be used in full sheets, with new hives (with full and large swarms), unless wires, or some similar and more costly and complicated device be used. We can't wire a top-bar without a bottom-bar. We can't use the two without end-bars, and there is the frame. Thus we see the frame grandly fits a place it was never made for. Very likely, had fdn. been successfully invented first, it would have suggested frames.

About black bees: I had both blacks and Italians in my yard. The latter had nothing to boast of superiority. Not till I got of Mr. Oatman some of the long leather-colored strain, of Dadant's importation, did I see yellow bees that were superior to the large brown German bees that I had, all points considered, and as yet they have little to boast over these bees. Crosses between the two strains have been the best bees I have ever seen. Each have many superior points, hence the controversies of the past, "Blacks vs. Italians," "Italians vs. Blacks." Let us have the good traits *all* in one race. It is easily ours. At that time I was using 1½-lb. sections, in which I stuck pieces of suitable comb. Here let me say, that the best of these pieces were not equal to the foundation of to-day. I know that friend Doolittle says, "Use these strips of comb yet;" but I say unto you, just try fdn., properly made in *full sheets*, in your sections, and you will not go back to any other system. For three years I never let any person (except some experienced bee-keeper) see fdn. about my place. I feared it would injure the sale of comb honey. I thought ignorance might be bliss. Well, only one person out of hundreds who ate combs made from fdn., and some poor fdn. at that, ever said a word. We ate it, and we do still. "Fire is the great purifier," and I feel right well about chewing any beeswax that I ever saw. My hands who work for me, visitors who come in to see the wonders of the new system, are sure to be chewing scraps of fdn. much of the time. Did you ever stop to mechanically analyze impurity? Let us be governed by our reason and not our emotions. Savages have more emotion and less reason, by far, than civilized folks. You cannot turn me against any commodity that presents pleasant sensations, and leaves no unpleasant reaction. Whims have cost this world much comfort and many grand improvements. Avoid the whims of people, and do by them as well as you do by yourself, and fear not.

REPORT TO DATE.

Out of 212 colonies, nearly one-half are dead and worthless; about one-half were packed with chaff, and one-half with sawdust and shavings above. The loss is greater among those packed with chaff, though they being in another apiary it is no test of packing, that we can be sure of. I use two styles of boxes,—the one described in March GLEANINGS, page 116, and a costly, well-painted box that incloses the whole hive. The old rough boxes are ahead, but we think the style of box not the cause. More than nine-tenths of the rest of the colonies in this county are dead, I think. While occasionally a man has a majority left, I know of several owning between 50 and 100 who report, "all dead long ago;" "I am done with bee-business," etc. In my acquaintance, not one bee-keeper in fifty (not a specialist) has come out even, in the long run. Most of them fail by supposing that they can get the modern income by the ancient outlay. *Some thing* has not been seen to come from *nothing*, since the world was made. I am now having a big time with fdn., and will report at some further day if desired.

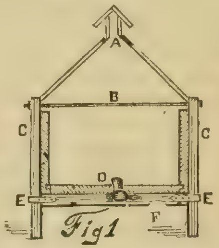
If my readers will excuse the plainness of the expression, I will say, that he who says that tinned wire for comb fdn. is not a perfect success, has found out just that much less than I have.

JAMES HEDDON.

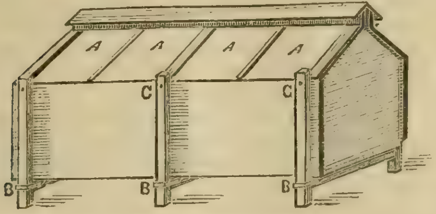
Dowagiac, Mich., April 18, 1881.

BLISS' SUN EVAPORATOR.

FRIEND ROOT:—I noticed on page 442, Sept. No., that W. S. Hart wanted to know how to construct a sun evaporator. Inclosed you will find a rough sketch of one that I made myself this summer; which may be of use to him, and some of the other bee-keeping friends.



In sketch No. 1, A is an opening two inches wide, covered with wire cloth extending the whole length of the tank, and the whole is covered with a narrow roof, to keep out the rain; B is an iron rod to hold it together; C C are posts, 3x4 in.; F is a piece of 3x4, extending across from post to post under the bottom, and is let into the posts 1½ inches, to support the weight. E E are pieces of iron bent around the posts, and bolted to F to keep it from spreading apart at the bottom.



Sketch No. 2, A A A A are window glass, B B B are the posts; C C C are the ends of the bolts; D is the honey-gate. The tank is made of two-inch plank, and is 7 ft. long, 3 ft. wide, and 20 inches high, all inside measure. The ends should set back from the ends of the sides about two inches, and let into the sides and bottom about ⅜ of an inch. The roof should be made tight, so that it will not leak; one side is made of boards; the other side has glass in it, so as to let in the sun, and should face the south.

HOW TO PUT IN THE LINING.

Go to the tin-shop and buy some sheets of I. C. tin, and have the tinner turn the edges and ends for clinching, as they do for roofing. Lay the bottom out on a floor, hammer down the clinches, and solder all *tight*. Take the measure of the inside of the tank, and then turn up the edges and ends of your bottom lining to that size, making it ¼ inch smaller all around than the inside of your tank. Now put the bottom lining in its place; begin on one side and put in the rest of the lining, one sheet at a time, clinching and soldering as you go. The lining should be bent over the top of the tank, and nailed to the outside with lath-nails.

The above tank ought not to cost more than $15.00, and will hold about 3000 lbs. of honey. The whole should be treated to a good coat of paint.

It would be difficult to tell just how fast it would ripen newly extracted honey; it would depend upon the weather and how thick the honey is when extracted. If the weather is cloudy, cold, and damp, it would not ripen the honey as rapidly as it would if it was clear, hot, and dry. Here in L. A. Co., an evaporator of that size would ripen (if full) rather thin honey in about 4 or 5 days; it depends upon how thin the honey is, and how thick you want it. You can extract the honey before it is capped over, if you have clear weather to ripen it in.

Los Angeles, Cal., Oct. 28, 1880. W. W. BLISS.

Later:—I made a little change in the evaporator. I put rods through the legs, below the tank, the same as above. Tell them to paint it black, or some other dark color, as it will absorb the heat.

W. W. B.

REPORT FROM FRIEND TOWNLEY,

THE ORIGINAL CHAFF-HIVE MAN.

FRIEND ROOT:—With the hope of inducing others to subscribe for GLEANINGS, I have given away nearly all of the back numbers. Not having them now to refer to, I am not able to state just when I wrote to you, recommending chaff as a winter protection to bees. Soon after its appearance in GLEANINGS, some of your correspondents claimed "priority of invention." Now, I have no wish to deprive any one of well-deserved "credit;" on the contrary, I shall be *most happy* to divide the "honor" with all claimants. Present your claims, gentlemen, but don't all speak at once. Previous to the winter just past, I have had the best of success wintering bees packed in chaff; but the last winter has been "too big a boo for the colt." Out of 60 colonies in my home apiary, I have lost 9 up to date, April 18th, and about the same percentage of loss in the one away from home.

In conclusion, you will confer a favor that will be reciprocated in any way you may suggest, if you will please insert, in the reading department of GLEANINGS, the following advertisement:—

FOR SALE,

But not recommended, 38 chaff-packed, wintering hives, at a price much below their actual cost.

J. H. TOWNLEY.

Tompkins, Jackson Co., Mich., Apr. 18, 1881.

Why, friend T., you do not mean to say 9 out of 60 is sufficient grounds for feeling blue, do you? Or is it that you prefer to use the chaff in the original plan we first started on, without having any permanently packed chaff hives at all? Please enlighten us. Those who have lost less than 15 per cent this year belong in Reports Encouraging department it seems to me.

GALLUP'S IDEAS;

ON PLENTY OF STORES.

EDITOR OF GLEANINGS:—Our California bee-keepers complain of eastern bee journals, and say that they contain too much about wintering; that there is no trouble about wintering here, etc. The great trouble here is, about carrying our bees through a dry summer. My impression is still strong, that they can be carried through every season here with perfect success, but not with the policy that some pursue. Bees should not be robbed here of all their stores in the fall, any more than in the East. Stocks that were left full of stores last July are now full of brood and bees, while stocks that were robbed of their stores late in the season are now comparatively doing nothing, while their near neighbors' bees are doing nicely. It requires good management here in California in order to be successful, as well as it requires skill and management in the East. True, bees will winter here successfully on a very small supply of honey; but in order to be successful, they must either be strongly stimulated, or they must have a large amount of stores to fall back on. They can gather pollen in some localities the entire year. By the way, I know of a splendid locality for raising bees and queens, and they could be kept perfectly pure; but the quality of honey would not be good for market, and I do not know the quantity that would be stored, but they could be bred at all seasons. Some good reliable queen-breeder ought to occupy that locality. Well, Mr. Editor, you see I am off the track, as sure as fate. A good two-story Langstroth or Simplicity, well filled with stores and bees, will be self-supporting, even in a California dry year, and they will yield their owner from 100 to 300 lbs. of honey in a good season, and have their hive well stored with honey for the dry season, if it should come; and if it does not come, the surplus honey can easily be taken out in the spring. Do not rob your bees too closely, even in California.

GALLUP'S PLAN OF INTRODUCING QUEENS.

The readers of GLEANINGS, or at least quite a number of them, know that I have had quite a large practical experience with bees, and now I am going to tell them how I introduce a valuable queen when I want to be certain of success, and without a probability of failure. It is a well-known fact to practical bee-keepers, that at certain seasons of the year we can introduce with ease by various processes, and then again we will fail. Now, it is the old bees that play the mischief, and not the young ones. We once in a while find a colony that will not accept a strange queen on any conditions. Now, when I receive an imported queen, or any valuable queen that I wish to be certain about, I go to any populous stock and take out one card of sealed and hatching bees, together with the adhering bees. Then go to another and do the same until I have three or more cards or combs (be sure not to get the queen from any of those stocks), place them in a new hive and on a new stand, and you have a stock prepared to receive your new queen. By mixing bees from several hives, they discover their queenlessness at once; and by allowing the queen to be caged 24 hours in your prepared stock, or until your old bees are all gone back to their parent stocks, which they will do the first fair day, then there are none but young bees left. Liberate your queen, and build up to a full stock by giving sealed brood as fast as required. Of course we use a division board in the new or prepared stock until filled up. In 40 years' practical experience I have never *once* failed by the above process. We introduced the imported queen we got last fall, by the above process, and wintered her on 4 cards, and built up this spring to a full colony.

E. GALLUP.

Santa Paula, Ventura Co., Cal., April 4, 1881.

We like your ideas of plenty of stores first rate, friend G.; but after having given the plan of mixing bees to get a place for introducing queens a pretty thorough trial, we have decided rather in favor of nuclei containing bees from only one hive. The result was rather contrary to my previous opinions, I must confess.

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POINTS OF DIFFERENCE BETWEEN BLACK AND ITALIAN BEES.

[*Continued from page* 166.]

THE *blacks are more ready than the Italians to work in surplus-honey receptacles not closely connected with the main hive.* My shallow chamber between the tops of the frames and the honey-board, which admitted the bees and the heat of the hive so freely into the supers, was a great success with the blacks. When the hive was crowded, and the honey harvest good, they so filled the supers that the newly forming comb could seldom be seen, except when the bees were taking their afternoon playspell; and if the honey-board was left off they began their new work at the top of the upper cover. The Italians, however, as though distrusting the safety of storing elsewhere, are reluctant to begin comb-building, except in close connection with their brood-nest. Supers placed on the shallow chamber are often neglected, even when supplied with combs, while they so overfill the combs below as to check greatly the proper increase of bees. If the honey-board is removed they usually begin to build from the tops of the frames, extending their combs *upward*, even when their weight causes them to bend more or less before they can be attached to the top.[*] I was finally compelled to dispense with the shallow chamber for Italians.[†]

5. *The comb honey made by the blacks from any light-colored supplies is usually more attractive than that stored from the same sources by Italians.* This is owing to the former leaving a larger air-space than the latter between the cappings and the sealed honey.[‡]

6. *With a queen of the current year, the blacks will hardly ever swarm, while, long after the usual swarming season, young Italian queens will often lead off swarms.*

7. *Black bees are much more sensibly affected by the loss of their queen than the Italians.* The almost frantic agitation which usually follows the removal of a queen from a black stock, is well known. Removing large numbers of queens for sale during the working season, from Italian colonies, such agitation was the exception instead of the rule. In most cases the only special sign that the bees missed them was the building of queen-cells. This greater attachment of the blacks to their queen is in some cases a loss, as they seldom attempt to supersede an old or inferior queen, and are thus much more liable to become queenless than the Italians, who do not hesitate to take timely measures to replace a queen whose fertility is much below par.[§] A careful observer has given, in the French *Bee Journal*, satisfactory proof of the numerous losses resulting from the death of aged black queens. It is probably the fact, however, that more bees are lost in winter in Italian than in black stocks, even if more entire colonies of the former than of the latter do not perish —the strange attachment of the blacks to their queen inducing them to cluster more compactly, in order to be nearer to her.

8. *In building, an Italian swarm seldom begins as many combs as the blacks, and therefore works them more compactly, squaring them out, as it were, as they proceed.*[‖]

9. *Black bees will readily build, between guide-frames, worker combs, while it is very difficult to get any satisfactory result in this line from Italians.* They will abandon the hive over and over again, or sulk for days doing next to nothing, as though they were conscious that, in the combs thus unnaturally separated, they could not prosper, ignorant, of course, that the separators would eventually be removed.

10. *The Italians, both young and old, adhere with much tenacity to their combs when they are lifted from the hive, while the blacks, more especially those newly*

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[*] They sometimes build a number of small combs in the shape of buttresses, to keep their main work in proper position until they can reach to the top.

[†] If the supers rest upon the tops of the frames, and have no bottoms, and the guide combs, or "starters," are fastened to the tops of the frames of the lower hive and near one of the uprights of the supers, the Italians will readily fill them by extending their combs upward. If bottoms are used, they should be very thin, and the starters should be low down, and attached to one of the uprights. Instead of swarming up into the supers like blacks, so few enter them that the whole process of comb-building can easily be seen.

[‡] Mr. W. W. Cary showed me combs of sealed honey made by the Egyptian bees, which looked very much like honey which had "sweated," from being kept in a damp place.

[§] It is only since the introduction of the Italians that it has become such a common occurrence to find two laying queens in the same hive, usually the failing mother and the vigorous daughter.

[‖] Mr. Cary found that the Egyptians, in extending their combs downward, built them almost as square at the bottom as though they laid off their work by a carpenter's rule.

hatched, tumble off so readily as to annoy the operator by crawling up his clothes, or exposing themselves to be trodden upon.[*]

11. *When the hive is opened, the Italian queen and workers are disposed to remain quiet, and when the frames are lifted out, the workers spread themselves over the combs.* For this reason, as also from their bright colors, Italian queens are readily found, while the blacks, both queens and workers, often fairly race off the combs, and that greatly increases the difficulty of many important operations.

12. *Under adverse circumstances, the blacks are far more easily discouraged than the Italians.* I soon learned this to my cost, when I was obliged to use black bees in making nuclei for rearing Italian queens. If any thing occurred to dishearten them, often without any apparent reason, their nuclei would swarm out and decamp with their queens—a thing which, with proper care, seldom happened when I was able to make all of them of Italian only.

13. *The Italians will, in some seasons, from the second crop of red clover, build new combs and store them with honey, when black stocks, in the same apiary, are losing weight.*[**]

14. *Italians suffer little, compared with the blacks, from the ravages of the bee moth.* After Italianizing my apiary, it was often difficult to find a single worm in a large number of stocks, while, if a black stock was brought to me, I could count, with almost absolute certainty, on finding a number. The much greater number of holes in the comb of the blacks than in that of the Italians shows plainly how much more the former suffer from the larvæ of the moth. When the blacks become hopelessly queenless, they seldom offer any opposition to the moth, while the very opposite is the case with the Italians. Before their introduction into our apiaries, the moth was the great bugbear of our bee-keepers—as witness the multitudes of patent moth-proof (!) hives.

15. *Italians are far less likely than the blacks, to rob or be robbed.* Those who have kept only Italians, can form but a faint idea of the incessant vigilance required, during the whole working season, to prevent robbing among black bees. Even when forage is abundant, much greater caution is necessary in manipulating with black than with Italian bees. When I had only a few black stocks and a large number of Italian, nearly every bee that attempted to rob when the hives were opened during a good yield of honey, was a black bee, and drone combs set out in the open air to be emptied of honey by the bees, would be almost exclusively visited by them. Black bees, when vigorously attacked, unless very strong, are apt to lose heart and give up the contest under circumstances in which, even if their honey is stolen from them, the Italians will persist in fighting and killing, until often only a handful are left.

16. *The Italians, by their superior energy and greater length of proboscis, will, on an average of seasons, gather much larger stores of honey than the blacks.* When honey superabounds, the blacks do well enough; but when it is scarce, and can be got only by unusual energy, then the superiority of the Italians is very manifest.

In expressing the opinion, that the Cyprians unite the best qualities of the blacks and Italians, I do not speak from any personal experience with them, but rely largely on the testimony of experts, both in Europe and America. M. Cori and Count Krakouski, after having, for over twenty years, sought out the best varieties, and who seem to have tested more kinds than any other apiarians, have at last settled down upon the Cyprians as greatly superior to any yet tried (See British *Bee Journal*, Vol. 8, p. 10), while our own Frank Benton, after unequaled facilities for arriving at the truth, believes the Cyprians to be a pure race, and a much better one than the Italian. If I had an apiary of Italian bees, I should Cyprianize them with no more expectation of regretting it than I had when I discarded the blacks.

Oxford, Ohio, April 21, 1881. L. L. **Langstroth.**

I am happy to add, that my experience corroborates almost, if not quite, every point friend L. has made; and inasmuch as this paper is the most exhaustive article we have ever had on the comparative differences of the two races of bees, giving minutely the queer points and peculiarities of each, I feel like, for one, tendering our old teacher a vote of thanks. All in favor of such an expression say—ay!

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[*] Until I read Mr. Benton's interesting statements in King's Bee-keeper's Magazine for April, as to the superiority of the Cyprians, I feared that if, like the blacks, they could be easily shaken off from their combs, they might resemble them also in their falling propensity.

[**] In unusually good honey years, the blossoms of the first crop of red clover are so surcharged in the sweets, and bees can obtain it so easily, that they pay little attention to white clover

Bee Botany,

OR HONEY PLANTS TO BE NAMED.

HONEY FROM SKUNK CABBAGE, AS A MEDICINE.

IN March Gleanings, Mr. W. E. McWilli asks if you know any thing about skunk cabbage (*Symplocarpus fœtida.*) If you will refer to the U. S. Dispensatory you will find a full history of it, and that it is a doctor's *root*, used as an anti-spasmodic and expectorant, and why is not the honey made from it a good cough syrup? E. R. **Douglass.**

Martinsburg, Mo., March 30, 1881.

WILLOW, ORNAMENTAL.

I send you by to-day's mail some cuttings that beat any thing for pollen for bees I ever saw. If you will plant or stick them in some damp ground they will grow just like willow cuttings. Please give name. Spring is one month behind time.

Smithsburg, Md., Apr. 18, 1881. D. A. **Pike.**

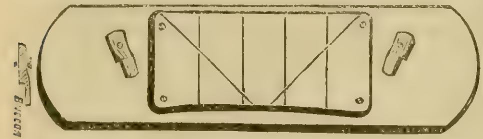
Why, friend P., they certainly are willow, I should say, but they are more beautiful, with their great-sized blossoms and variegated colors (plumage, it seems to me, it ought to be called), than any thing I have ever before seen or heard of, in the shape of a willow. We will plant a part of them, and send the rest to Prof. Beal.

I feel that I shall do you a kindness in recommending, especially among our 5-cent books, two particular ones. They are "Sheer Off," and "Silver Keys," both written by A. L. O. E. Although both are stories, the Christian precepts are most excellent and helpful, and my wife and I both broke forth in exclamations of surprise while reading them, to find that any writer *could* come into our own lives with so much helpful counsel.

WIRING FRAMES.

A WAY TO DO IT WITHOUT MACHINERY.

HERE is my way of wiring frames. Take a piece of ⅜ board 3 feet long by 9¼ inches wide, and on it place another piece 5-16 thick, and perfectly square, that will just fit inside of frames, and lined as in diagram, and fastened with four small screws. This board should be hollowed on bottom edge 1-16 in. with a true sweep from corner to corner, so the bottom of frame, in wiring, may spring up to the board. Now for the operation, the board being ready (understand, my frames are all made without being punched:) Take this board across your knees, place the frame upon it, swing your button on, to hold the frame on to board; have a small awl, and make holes right where lines on board come to frame; then "cant" up your board and drive a six-oz. tack about half way in to center of bottom of frame; measure off your wire, 7 ft. 2 in.; take hold of the two ends, and slant from top-bar, through the two center-holes, down through bottom-bar, back up through, and bring your diagonals down through bottom; draw tight, and take a turn or two around the tack with each end, and drive the tack in, leaving it sticking through. Place the bottom of your tin bar over the point of the tack, and spring in top swing of your buttons, and you have a perfect frame, and I can wire one every 2½ minutes. I send this for the benefit of beginners.



You will see, by springing in the bar, that it will press the bottom of frame back on a straight line. I punch the two center-holes in top under the guide-bar, next two over, and ends under, passing diagonally over one and under the other, bringing them down to the tack. L. S. SMITH.

Cherryfield, Me., Apr. 14, 1881.

Many thanks, friend Smith. Although your plan of boring the holes by hand seems a little laborious, if you can do a frame every 2½ minutes, you do pretty well. The way we manage here to get the wire just the right length, we take a thin board, just ½ the length wanted, and sharpen both ends. Cover these ends with folded tin so the wire will not cut into it, and then wind the wire from a pair of swifts over the board. When all on, cut the folds at one end, and you have exactly the length, and a bend right where the middle comes. This enables you to draw it through right. Girls about a dozen years old put the wires in with a frame quite similar to yours. We pay them 50c per hundred frames, and they can do a hundred in a day without working hard.

NEIGHBOR JAQUITH, of New Portage, bought of us, July 21st, 1 lb. of bees and queen, which he put at once on empty combs, without any brood, and he says now, April 7th, that they are a good swarm. Of course, they were fed, the season being poor; but they had no other help. This answers partly the question that has been asked so many times, as to what 1 lb. of bees and queen will do, in a hive filled with combs.

Reports Encouraging.

LAST fall I packed in chaff 63 swarms, and have now 57; wintered a few on 3 combs. Many here have lost all their bees. Friend Townley (I believe he is the man) has placed all of us under obligations for having introduced chaff as a protection for bees. The bee-keepers of America should present him with a medal or a handsome sum in cash. J. A. NEWTON, M.D.

Boonville, Ind., April 10, 1881.

I think about half of the bees in this part of the State are dead. I wintered in the cellar, and had unusual success. Out of 90 stocks, Cyprians, I lost only 2 (one was queenless, and one starved.) In an experience of some 16 years, I never had my bees come through so well before. Give me a good cellar for a winter such as this. For early and late breeding, give me the Cyprians. I. B. R. SHERRICK.

Mt. Zion, Macon Co., Ill., April 15, 1881.

In consideration of the multitude of gloomy reports, we would add another cheering one to ours of an earlier date. We have a small apiary of 8 stands of blacks, about 6 miles in the country; 2 chaff, 4 L. and 2 old box hives, all of which are in splendid order, and are to-day testing the new candy you sent us last week. They were warmly tucked up under 4-inch chaff cushions, but had no other protection or care; were out on their summer stands.

Cleveland, O., March 24, 1881. A. C. KENDEL.

I put 155 in a cellar, or bee-cave, on the 15th of November, and have just finished taking them out to-day, the 15th of April, five months, or 151 days, without a fly, and all are alive and kicking. Have not lost one so far. Some few had dysentery. One of these were Italians; about 20 were hybrids; the rest were blacks. Now how will this jibe with friend E. A. Morgan's report in last GLEANINGS? he says, "If you must winter in cellars, put none in but pure Italians." I merely refer to this to show that black bees can be wintered in cellar as well as Italian. Quite a large number of bees have died in this county, as we have had a terrible winter. There is still lots of snow on the north hill-sides yet.

ROBT. QUINN.

Shellsburg, Benton Co., Iowa, April 15, 1881.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

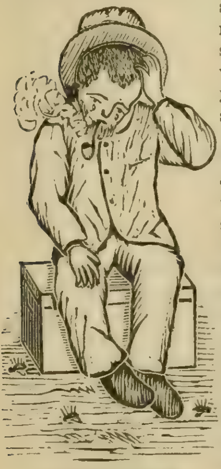
STARTED into winter-quarters with about 140 stocks, in chaff hives, well protected, but pretty weak in bees. During the winter and spring, the queens were sold out of perhaps 20 of them, and the bees were put with others. To-day, April 22, I have 12 hives with bees in them. Three of the 12 are gathering pollen fairly, but the other 9 will pull through, only with the very best kind of weather and care. The cause of the loss, so far as I can tell, is, first, too few bees; second, that the combs were handled and mixed during the process of uniting after queen-rearing, so that the bees had no chance to build and wax up in old tough combs before the approach of cold weather, as they usually do; third, the long winter, which gave them no *good* opportunity to fly, for a period of nearly 6 months. I am not quite sure in my convictions, from the fact that others lost heavily, who complied, so far as I can tell, with the first of the above conditions, and also that some wintered well whose bees were in as bad shape, or nearly so, as mine. Another thing, I do not know why those three fair colonies came out better than almost a hundred others.

The above report is from myself, A. I. Root, Editor of GLEANINGS.

P. S.—I should feel a great deal "badder," but there are so many other sufferers in the "same boat," that, some way, in one sense, I rather rejoice at being among you, *especially* if my presence will in any way "enliven the gloom" that seems to hover over the greater part of the bee-keepers of our land.

P. S. No. 2.—I just want to say, that, with God's help, I don't mean to be here another spring. How is it with the rest of you, boys?

I have fought bravely and long against the—what I am now persuaded—inevitable; but I was forced to succumb at last, and came with feelings of indignation and chagrin to the inhospitable door of Blasted Hopes. I knocked; the door was opened with alacrity. I stepped within: I saw enthroned upon a throne built up of ruined homes and lives, of shattered purposes and plans, of blighted prospects and expectations, a monster in looks and attitude—*Blasted Hopes!* Why are so many bright hopes and anticipations born within us, only to be crushed and trodden to death by this fiend?



BLASTED HOPES.

In the summer of 1878 I was seduced, by flattering accounts published in your journal and other papers to embark in the bee-keeping business. I bought six colonies of bees, in Langstroth hives, and wintered them successfully that winter, but did not get any surplus honey. The next winter was much the same, and last summer was worse than any previous year, so that I had to feed as late in the fall as the weather would permit. When the first fine day of spring came this year I went forth with buoyant spirits to examine my stock. I opened a hive; not a live bee in it. I went to the next; it was in like condition. My heart began to smite within me. I went down the whole length of my apiary with like result, and, coming to the last, I sank down upon a box, overcome by despair. I send you a sketch of myself at this point of affairs, taken by my little daughter, who happened to be looking out of the window. Do not frown when you see the pipe; it gives me great comfort at such times, and is the only thing that can stop the fast-flowing tears of despair. R. W. RODNEY.

Dayton, Ohio, April 4, 1881.

PECULIARLY AGGRAVATING.

About five-sixths of the bees here died this winter. I had 7, and 5 died; and one of the others came out and united with the other, and then they killed both queens. That leaves me queenless. NOAH MILLER.

Bradford, Miami Co., Ohio, April 14, 1881.

I do not think you will get to buy many bees in this section of the State, unless they be the dead ones, for there are more of that kind than the other; but I suppose you have enough of that class in Ohio, though I hope they are not so plentiful as they are around here. DAVID C. SMITH.

Lewisville, Henry Co., Ind., March 26, 1881.

Bad luck to me in wintering! My bees lost 70 out of 88, with prospect of losing more if cold weather continues much longer. The last six weeks has been death to them. I have lost over 50 within that time. CHARLES E. GLAZIER.

Adams Center, Jefferson Co., N. Y., April 9, 1881.

I know how it is, friend Charley. "I've been thar."

"Busted" again! One stand of bees left out of 22 in fall. That makes 126 colonies in 3 winters. Now, you fellows who are taking the bee fever, just take a look at my apiary; 100 little cedars, set of hives, frames, boxes lying around; dead bees, bare ground, piles of snow and ice, 3 feet deep. The linden harvest last season lasted 3 or 4 days all told, and that was the best of the year. No swarm of bees here could make enough to last over winter. I fed over 300 lbs. in frames last summer. Heaviest snowstorm of the season fell on the 19th. J. E. JARRETT.

West Point, Iowa, March 17, 1881.

Never before, in the recollection of our old bee-keepers, has there been a winter so detrimental to our industrious little pets. There have been seasons when the useful insects were few in number, but never, previous to this date, have bees been so nearly extinct as now in this vicinity. Last fall no less than 300 colonies of the little fellows decorated and made happy the homes of our neighbors; but at present about 292 colonies are no more. Apiarists gave but little attention to the little honey-gatherers last fall. Out of 30 good colonies, I have but one feeble colony remaining to mourn the loss of their deceased neighbors. E. J. HINSHAW.

Lynn, Ind., April 1, 1881.

After thinking I was doing a nice thing by feeding up my weaker stocks of bees last fall for winter, this spring's examination revealed the fact, that my 18 stocks were all dead but one. Your cartoon for April represents me very correctly, meditating what I should do with hives, besides some 25 new hives over, not used, mostly filled in top story with sections, foundation starters, and tin separators. Truly these are blasted hopes. The winter was so long continued and cold, without any warm days for them to fly, I feared the result. My bees were all common blacks, and I think I shall try again with Italians. I should have said, however, that the bees were mostly short of stores. HORACE KINGSBURY.

Lockport, Niagara Co., N. Y., April 15, 1881.

SUCCESSFUL CELLAR WINTERING.

I TAKE this moment to fulfill my pledge to report my success in wintering my bees; and I do it very cheerfully, for the great desideratum in bee culture is wintering, and we are all anxious (I suppose) to adopt the best methods. You may recollect that at my last report I had 138 hives in cellar, 9 1½-story box hives, and 129 imp. Simplicities. I put them in about the 15th of November, and took them out April 15th. I have handled them all over this week. I find one box hive with bees all dead; they died in January of dysentery. Two Simplicities had no queens, and the bees all left them at the first fly, and went into the other hives. In one other hive I found no brood nor queen, but about 4 quarts of bees. All the others, 125 Simplicities, have brood in all stages, and plenty of eggs. The 8 box hives seem strong, and that is all I know of them; 4 of the 125 were so weak in bees that I put in division-boards to help them keep warm; and 10, which had plenty of bees, were so light in stores that I gave them one card each of sealed basswood or clover, and should have given more, but there were eggs or brood in nearly all the combs, and it was difficult to make room for it without taking out brood, eggs, or honey. The rest, 111, are all very heavy, and full of bees; nearly or quite one-half of them are literally full of bees, so that they lay out when the sun shines on them. I think there are more bees to-day than there was when I put them in the cellar. This, I think, is better than last year. To guide or help those who may adopt cellar wintering, I will again describe my cellar. It is 16 by 26 inside measure, 7 feet high, in dry sandy soil, the bottom paved with pounded stone. A 4-inch tin pipe goes from cellar to a very tall chimney, which receives the pipe from a large sub-burning stove, in which there was fire kept, day and night, while the bees were in the cellar; and a 4-inch pipe enters one cellar window at opposite end from chimney, and turns down by elbow terminating near the cellar bottom. But this was not enough ingress, and I had to open an outside door many of the nights. The pipes, both from stove and cellar, are made very tight so as to admit no air to the chimney, but from the cellar when the stove-dampers are closed.

If my memory serves me, you said you would give one insertion of bees for sale by the pound. (That is just like you, to advertise gratis when it is to cut off your own business, just because it will help some poor fellow who has lost his bees.) If I am correct, you may say to the friends that I will supply bees by the pound at your rates, to the extent of 10 bushels or so, and will put in queens when I have them, for 50 cents each (mind, they are blacks and hybrids raised from Italian drones), but they are large, healthy, and enterprising bees—a good strain of workers or honey-gatherers. H. V. TRAIN.

Mauston, Wis., April 21, 1881.

Many thanks, friend T., but I think your ten bushels of bees will be gone quickly, as soon as the friends get this journal. You give me more credit than I deserve; it was partly because it was next to impossible for me to fill the orders, that made me give this offer. Your offer of putting in queens, even blacks, is very liberal, and will doubtless prove a great help to many who are anxious to get bees on their combs. I think I shall have to build a cellar like yours, or similar.

ENCOURAGING REPORTS AND BLASTED HOPES

BOTH IN THE SAME LETTER.

I THOUGHT I would write a few lines to you and let you know how we poor (?) bee-keepers in this section of the country have made out this cold winter which has just passed. It has been a very bad winter for the most of the bee-keeping fraternity; but as for myself and a few of my neighbors, we have no reason to complain so far. A few of us here were wise enough to put our bees in a good cellar built for the purpose (well ventilated), and have been very successful with them; and, by the way, I am inclined to think it the best way. There were four of us who put our bees in one cellar, and I will now give you the number of colonies put in this cellar, and the amount of losses, which we consider very light:—

A. Jennings	146	lost	5
W. Turner	30	"	0
C. S. Lobdell	35	"	1
G. S. Merritt	18	"	1
Total	229		7

Another neighbor, Mr. C. S. Hand, put in his cellar 74 colonies, and lost only 2. We think this a pretty good report, and we don't any of us feel like being put in Blasted Hopes. Our bees are all doing finely at present, filling from five to eight spaces in hive with bees.

I will now give you a different list, although we do not feel like bragging over them, for some time we may have bad luck as well as they, and we would not like to have them brag over us when we have bad luck:—

W. Makely, in cellar	200	col.,	lost	60
H. Gould, outdoors	185	"	"	185
J. Snyder, "	70	"	"	70
E. Snyder, "	100	"	"	100
E. & C. Snyder, "	15	"	"	15
J. H. Lamb, "	15	"	"	15
Z. Lockwood, "	55	"	"	55
H. Kelley, "	13	"	"	10
J. M. Hannay "	15	"	"	15
Total	668			525

All of these were within a circuit of about three miles of me, in different directions, and there is a number from whom I have not heard any thing. If you consider this report worth putting in GLEANINGS you can do so; and, by strict attention to business, we hope to be able to give a good report next fall. By the way, I think that GLEANINGS is one of the most interesting papers I ever read. I would also say, if any dealer in apiarian supplies or queens who happens to read this will send me his catalogue and price list, it may be some benefit to them some time. C. S. LOBDELL.

South Waterloo, N. Y., April 20, 1881.

SOME kind friend has sent us a copy of the Saginaw (Mich.) *Morning Herald*, detailing the losses of the bee-keepers of Flint and Farwell counties. The reporter states that, out of 1359 colonies, but 432 are alive. O. J. Hetherington lost 249 out of 250. Dr. L. Whiting lost 50 out of 90, while the Wilkin sisters, of Farwell, Clare Co., lost only 2 out of 50, and came out ahead by a long way of any of the old veterans in the vicinity. It may not be fully demonstrated that women are equal to the task of handling the reins of government, even should they want to do so; but I think it is pretty certain they can manage bees—ay, and *keep* them, about as well as men can.

TIN CANS FOR RETAILING HONEY.

IT seems to me that tin is, without question, destined to be the material to hold the great bulk of our extracted honey. All of our canned fruits are sold in tin, almost to the exclusion of glass, and it would seem as if the reasons for so putting the fruit on the market would equally well apply to honey. The Dadant pails, or a pail with a cover, are without question the best thing for retailing honey in places near to your apiary; but in no way that I can see are they adapted to shipping honey long distances. I regret this, for the idea of having a pail that will be worth all it costs, after the honey is used out, is a very important one indeed; but I can see no practicable way by which we can solder a pail up tight, as it must be to hold honey safely, and then get the lid off without marring it, after it is in the hands of the consumer. It is true, we might solder a very thin cover of tagger's tin over the top of the pail, just under the cover proper, but to unsolder this, or cut it out, without leaving sharp and dangerous, to say nothing of unsightly, edges, is a matter not easily managed. Of course, a tinsmith might do it; but to devise means or tools by which the average housekeeper could do it is another question.

Well, suppose we drop this idea, at least for the present. What kind of packages shall we use for soldering up honey as they do fruit? Our friends in California have decided pretty unanimously, I think, on at least two staple sizes—fifty-lb. cans for honey in bulk, and 2-lb. cans for honey for retailing directly to the consumer. The 50-lb. cans, or at least those sent us by friend Wilkin, are made 9¼ inches square, by 13½ deep. I presume this square form is chosen because two of them can be cheaply crated in a strong box, making a secure 100-lb. package. The plan of making these cans is extremely simple. Take 4 sheets of tin, of such size that, when ¼ inch is folded on each of the four sides of each, they will measure just 9¼x13½. Now, these folds are not to be clear over, nor are they to be a right-angled fold, but only at an angle of about 45 degrees. In other words, a miter angle, such as we see on a picture-frame. In fact, we will put the four sheets together (their longest edges together), like a picture-frame, and solder them so as to make a tall square can, without top or bottom. The top and bottom, made in the same way, 9¼ square, are now dropped in and soldered. This makes a strong can, and very smooth looking, on the outside; but on the inside these folded edges are all sticking in toward the center. Such cans can be made with very few tools, and by one who is not a practical tinsmith. To get the honey out, we have only to punch a hole in one corner; with a smaller hole for a vent, in the opposite corner of the same end, we can pour it out as readily as we would pour from a pitcher. Three sheets of tin, 14 by 20, make the whole, with some to spare. I presume a fair price for such 50-lb. cans would be about 50c., or perhaps 40c. by the hundred.

Now, the other popular can, the 2-lb. one, is of course made round, to save labor and material. The most economical shape for a honey-can, as well as for a hive for bees, would be a sphere; but as that is out of the question, we take a cylinder as the next best form. I fear many of the can manufacturers have not figured well on the best proportion for these cylinders. I mean the proportion the height should bear to the diameter. Perhaps we should use the tin to best advantage if we had the height and diameter about equal; but we find, in cutting tin, that the circles for tops and bottoms waste largely, while the piece for the sides can be got out so as to use almost every particle of the sheet. Now, while friend Wilkins' 2-lb. can holds exactly the same as mine (about a pint and a half), his is 4¼ in diameter, and 3 inches high, while mine is 3½ in diameter, by 4 high. Mine is about the proportion of an ordinary 2-lb. fruit-can. There may be a reason for making cans so large around; but if there is, it is unknown to me. Of course, we must have a hole left in the top of the can, to pour in the honey. We make this in all the covers, with a 1¾-inch punch. A two-inch punch will then cut a cap to just cover it. We fill these cans rapidly, by setting them in a large tin pan, and fixing this just at the proper height under the gate of an extractor can. To make the honey run rapidly, we warm it until one can just bear his hand on the can. This will make it flow fast, and it is much easier to stop when the can is just full. Not a particle is allowed to get on the cover, or the solder will not stick. A hole must be pricked in the cap before soldering, or the steam would interfere with a perfect joint. After the cover is well soldered, a little solder is dropped into this hole. The cans are now labeled, and then are ready to be packed into boxes, two dozen in a box. For the sake of keeping the labels clean and bright, we use new clean sawdust. Thurber's price for choice honey put up in this way is $8.00 per case of two dozen boxes. This would be 33⅓c. per can, as the cost to the retailer. At this price, he could not well sell it for less than 40c. Our price is, for the best honey we can get, $6.00 per case, and we retail it for 28c. per can. Where one has freight to pay on it, it would have to be sold for 30 or 35c. Honey soldered up in this way is clean to handle, and will keep in good condition for a hundred years.

TRIGONA, OR BRAZILIAN STINGLESS HONEY-BEES.

(*Continued from page* 167.)

THERE are about fifty species belonging to the genus *Trigona* described, and thirty of the genus *Melipona;* these insects are the stingless honey-bees of South America; there are also as many in Mexico, and they are found in India, Africa, Australia, and the islands of the Eastern Archipelago. A few of these are black, but the majority are of different shades of yellow or reddish brown. The *Trigona* vary in length from about two to four lines. Their wings are longer than the abdomen; the stigma is distinct, with its inferior margin rounded; the abdomen is short, somewhat triangular, compressed beneath, and forming a corona, or sharp edge, down the center; the mandibles are serrated, denticulate, or sometimes edentate.

The form of the palpi differs considerably in the various species; in some, the two elongate basal joints of the labial palpi are narrow, and only slightly widened at their base; others are more widened at the base, and have also a broad, thin, semi-transparent, flattened margin. The tongue also varies greatly in its relative proportion to the labial palpi, being longer or shorter in different species.

The arrangement of their brood-cells resembles those of wasps—horizontal combs and vertical cells at one side of the comb only. These are about one and a half inches in diameter, and used for brood only. The honey-pots in the nest belonging to me are from three-eighths to half an inch diameter, and are coated with resin, with an opening at the entrance large enough so that only one bee can pass through at a time; these pots are filled with pollen and honey. Some of the *Trigona* construct their nests in the hollow trunks of trees, others in banks on the ground; some suspend their nests from the branches of trees, whilst one species constructs its nest of clay, it being a large size. Mr. Stretch found a nest of *Trigona* at Panama several feet in length, in the hollow of a tree, containing thousands of individuals. Mr. Peckalt, of Cantagalla, in Brazil, kept four species of *Trigona* in his garden, to study their habits. He had one hive of *Trigona Mosquito*, one of *Trigona rufierus*, one of *Trigona Mandacaia*, and one of *Trigona Urucu*. He says he has observed "*Trigona rufierus* swarm just like the European honey-bees, about the end of March, when the cold time begins, whilst in April, May, June, and July, they appear to increase very scantily—I suppose in order not to raise too many useless feeders. Their mode of life appears almost identical with those of *Apis Mellifica*. I have found only one queen in a hive."

The quality of the honey varies considerably in the different species of *Trigona*; of one it is said to be very good; that of another, tolerably so; of another, it is poor and rather tasteless, whilst that of some is said to be unpalatable. This may be accounted for by the different species of the genus *Trigona* visiting different flowers, caused by the different relative length of their tongue, adapted for reaching the nectaries of the particular flowers which they usually frequent. Those species of *Trigona* that have their tongue short, frequent flowers having open corollas, whilst others, furnished with an elongated tongue, extract their food from elongated tubular flowers.

Although the *Trigona* can not sting, an apiarian would be compelled to beat a hasty retreat if he should attempt to meddle with their nest. For such an offense, the little fellows will make a terrible attack on any person, and in a second the hair and clothes of the attacking party are filled, and with an offensive squeaking they will cut off his hair—a much worse disfigurement than a sting. (Here we see the wisdom of the Creator in endowing all living creatures with instincts or instruments for their preservation.) It is therefore impossible to succeed in any way with such a species, and the natives can get possession of only a taste of the honey which is found in their nests, by threatening them with death and destruction by building a large straw fire, and stifling the bees with smoke. All of these stingless bees, and also the better qualities which do not make an attack on the hair, and which are in some respects similar to ours, resemble ours in outward appearance only, but in nature have nothing in common with the *Apis Mellifica*.

The wax-like material of the comb is resin, which is gathered from the trees and leaves, and according to its kind is more or less greasy, black, gray, and yellow. The hind part of the *Trigona* body, in consequence of the missing organism for the secretion of wax, is comparatively too small, and therefore this wax is not of animal origin, as is the case with ours, but a vegetable substance. For this reason, those bees need less honey for their nourishment; they do not live together in large families, and have small houses and little work.

I think I have said quite sufficient to prevent my clever American-Cousin bee-masters from wasting their money on such profitless insects as "stingless bees." WILLIAM CARR.

Newton Heath Apiary, Near Manchester, Eng.

THE COMING BEE.

"AND HOW TO CATCH HIM."

DEAR GLEANINGS:—As you give me so many good ideas on my pet occupation, bee-keeping, I don't know but I ought to add a mite to your useful store of knowledge, provided your worthy editor thinks it worth adding; and as the "Coming Bee" seems to be the great absorbing theme of the day, ransacking the distant "isles of the sea," and the far-off "Eastern climes," if possible to "find him," I thought perhaps a few items as to how to "catch him" nearer home might be of interest to many of your readers, and especially your A B C class. My experience in bee-keeping runs back over a period of 25 years, in Virginia, Iowa, and California. I think I owned the first Italian queen west of the Mississippi River, which I got from Mr. Langstroth in July, 1861. For the first 6 or 8 years I "bred for stripes," as that seemed all the go; but I finally came to the conclusion, that honey pays better than stripes, and so changed my "base of operation," and soon had the satisfaction of knowing that I was right.

I sold out in Iowa in April, 1872, and came to California, and soon had a lot of foul brood on shares, to try my luck in bees in California. Then in November I bought 45 colonies, intending to make bee-keeping my business while I remained here. And now, in as few words as I know how, I will tell you how I have managed them, and let you be the judge as to whether or not I acted wisely; and if I am on the track of the "coming bee" or not.

I tacked a label on each hive, and made a note, not of the stripes (some had one, others two and three, and some had none), but of the amount of honey each one made, and also of their other good and bad qualities. Then when the season closed I made a note of each colony in my memorandum-book, selecting my breeders, and condemning those with undesirable qualities, while all was yet fresh in my memory. I then bred my queens and drones from my best queens, and destroyed my poorest, and this I have kept up ever since. I also get bees from different places, far and near, to improve my stock and prevent in-and-in breeding; and as a further improvement of my stock I sent an order for 12 Italian queens to Mr. J. Oatman & Son, Dundee, Ill., as Mr. J. Heddon and others claimed that he had the best stock of Italians in this country for business.

When, in August, 1879, eleven arrived safe and sound, my neighbors took 3 and I kept 8, but lost one in introducing. I raised only 8 or 10 young queens that fall, as I don't like to raise many queens from a stock until I have first tested it.

This brings us to the season of 1880, which will bring out the *special* points I wish to notice in this article. The season was cold and windy, and bees did nothing but swarm until after July 20th. I raised about 60 queens in the spring, and about half were Italians. I aimed to have half of my drones Italians, but don't think I succeeded. When I say Italian, I mean the Oatman stock. I call my stock the *American* bees. Yes, full-blooded American stock. But out of all my young Italian queens, I don't believe I have one that mated with an Italian drone. Whether any of the American queens mated with any of the Italians, I do not know, as they do not yet breed up to a fixed type of rings, horns, etc. I pronounced all the queens I got from Mr. Oatman as pure. On the 20th of July I commenced hauling my bees to the river. I was then living three miles out on the plains, and every thing dries up during the summer. I moved 62 on the Stanislaus, and left them in charge of a neighbor bee-keeper. They made but little honey there, and 24 I moved on the Great San Joaquin, where I had charge of them myself; 12 were full-blooded Americans (9 were young queens, and the other three were one and two years old;) my 3 Oatman queens (the other 4 having died, and another died this winter) and 8 Oatman daughters, and one which, I think, was a granddaughter from a '79 Oatman queen, that I think was superseded last spring.

Now, here I will give you a table of my 24 colonies, as I copy from my memorandum-book:—

No. Col.	Stock, Etc.	Year when made.		
		1878	1879	1880
68	A '79 American queen................	——	70	150
69	Italian..............................	——	——	——
70	Oatman..	——	——	68
71	American	——	——	106
72	American............................	——	——	144
73	Granddaughter, Italian, nice honey	——	——	225
74	Italian	——	——	90
75	Italian..............................	——	——	118
76	Oatman, dead now....................	——	——	87
77	American, condemned.................	——	——	56
78	'79 Italian, but little gum..........	——	——	160
79	American, very gummy................	——	——	168
80	American	——	——	106
81	'79 Italian.........................	——	——	106
82	Italian, no gum......	——	——	90
83	American, condemned.................	——	——	33
84	American	——	——	81
85	'79 American........................	——	140	135
86	'78 American........................	90	150	125
87	'79 Italian.........................	——	——	183
88	Oatman	——	——	22
89	American	——	——	137
90	American	——	——	——
91	Italian, no gum......................	——	——	120

Now, from the above table you will see that 2 made no honey. They were very weak, and lost their queens when I moved them to the river. Some of the others were weak too; so you see that I didn't have all my best colonies in this lot.

The above table summed up makes over 2500 lbs. all comb honey; the 11 Americans made 1241, an average of 112 lbs. per colony; the 3 Oatman made 117, an average of 59, while the 7 daughters and granddaughter made 1092, an average of 136. But a glance at the above table shows that the granddaughter beat them all. While she made 225 lbs., she is also credited with making the nicest honey.

Among the different lots of bees that I got I never before last fall figured up so closely the amount of honey each strain of bees made, and I must confess that the figures astonished me. Now, I never found fault with Mr. Oatman's queens or bees; but I have no doubt but that he has as good a stock of Italians as can be found anywhere. My neighbor who got two of those queens we got from him claims they are the best stock he ever owned, and that about the only honey he got last fall was from his full-bloods, and from the few queens he raised from them, and he told me, just the other day, that he wouldn't take $10.00 for them. But what puzzles me is this: while the full-bloods figured so low in honey, why did their daughters, mating with my improved drones, figure so high? The average of 59 lbs. for the full-bloods, against 112 for the Americans, clearly shows the superiority of my strain; but why did none of the young Italian queens mate with the Italian drones? were the American drones so much more active and long-winded, so that the Italian could not keep up in the chase after the queen, or what was the cause? Can you, friend Root, or any of your readers, solve the problem?

Now, am I not on the right track to "catch him"? Doesn't my plan embrace "long-livedness," "long-windedness," and "long-tonguedness," and every other "long thing" that it takes to make up a superior strain of honey-gatherers?

A few of our bee-men, and they are by far too few, claim that the drone is "a mighty factor in the improvement of the honey-bee." But I claim that he is not only "*a*, but *the* mighty factor." I have long since been satisfied that the "drone does more to determine the character of progeny than the queen," and have acted accordingly, and have had no reason to regret my labors in that direction. Now, friend Root, what advice ought I to give your many readers; to go and do as I have done, or to get an imported queen every few years, and breed from her only? Another question I would like to have many of our queen-breeders answer: In many of their circulars sent out, they set forth in glowing terms the superiority of the Italian bees, and especially their "fine improved strain," which has cost them years of painstaking and care to breed up to its present standard, and then wind up by saying all, or nearly all, our queens will be bred from an i-m-p-o-r-t-e-d m-o-t-h-e-r! And right here I shall make a bold challenge, without the least fear of a successful contradiction. Not one queen-breeder that is breeding *only* from imported mothers ever has or ever will make any improvement over the original race; but those who adopt a course similar to the one I have adopted will be the ones that *I*, at least, shall look to as the ones that will give us the coming bee. Neither do I care where he comes from, nor what he is made out of; but he is on the way as sure as fate. Now, friend Doolittle, what do you say to this? I sold my little farm, hence am not settled; but as soon as I get settled again, and if I continue in the bee business, which I expect to, I hope to offer a reward for a better stock of bees than mine.

Now, friend Novice, if you will pardon this long letter, I will quit right square off, and not say another word on this subject. I was going to say something, but I see I can't, about that hive. I sent you a model filled with raisins. I have so improved it that you would hardly know it. I have used it three years, and consider it the best hive I know of, in the way I handle bees. J. F. FLOURY.

Ripon, San Joaquin Co., Cal., March, 1881.

I think you are pretty nearly, at least, on the track, friend F.; but as I understand your experiment, is there not room for us to consider that a good many of the results may have been accidental? It is very likely that no further considerable good may come from more imported bees. We shall this season rear queens largely from our red-clover queen, and other breeders will probably select some extra queen from among their stock, and it will then rest with the purchaser of queens to say whether they want one from a choice home-bred queen, or from imported stock as heretofore. Last season, nearly half of our orders were for queens from our red-clover stock.

* * *

FRIEND MOORE'S "TWO-HIVE" APIARY.

AND WHAT HE DID WITH IT.

I COMMENCED last season with two colonies of bees, one Italians and the other blacks. So you see I had just half and half of each kind. Well, the Italians are far ahead of the blacks. I run the blacks entirely for increase. Also increased the Italians some. Increased both to seven very fair colonies, though the season was so poor that I had to double the number up to five colonies, and feed syrup made of coffee A sugar to keep them from starving in the fall. I Italianized the blacks, bought three weak colonies from a neighbor, united them into one, and now have six colonies, which have wintered nicely up to date.

NATURAL QUEEN-CELLS, AND TWO QUEENS IN A HIVE.

The Italian colony described above builds natural queen-cells all the season, commencing, as they did, in the latter part of May, and continuing so late in the season that the last queen that hatched could not get fertilized on account of there being no drones. The colony was not stimulated in the least. In fact, the surplus arrangement was on all the season, and the bees drew out ten frames of fdn., and gave 46 lbs. of nice extracted honey from white clover (which was about twice as much as obtained from any black colony in an apiary near by), and built about 40 natural queen cells. I also made two strong two-frame nuclei from it, and took some frames of brood to build up weak colonies occasionally. Strange to say, the bees kept on building queen-cells just as if they had been crowded for space or stimulated under the impulse of natural swarming, which was not the case, as they showed no sign of swarming the whole season, and the last thing they did in the fall was to hatch out a fine young queen, which was kept in the hive for several weeks, and then killed by the bees just before cold weather, as she was not fertilized. So you see they will keep two queens in the hive. The bees are the yellowest I ever saw. A great many of them show four distinct yellow bands. The queen is very prolific, and her daughters are also, one of which has shown the same disposition of always keeping a laying daughter in the hive to help her. Of course, I always take the young queen out when she has commenced laying; but, as an experiment, I let one stay in the hive 25 days after she had commenced laying, and have seen the young and old queen on the same frame of brood in less than half an inch of each other without showing the least sign of fighting. I am experimenting, and as all of my queens (except two) were reared from natural cells, I hope, by the end of the coming season, to have several that will keep two queens in a hive.

DIVISION-BOARDS MADE OF SLATS LIKE THE MATS.

By the way, friend Root, what is your decision on those comb-guide division-boards, a description of which I sent you last year? I am wintering three two-frame nuclei in one of your L. Simplicity hives, by means of said division-boards (two of each kind), and on examining them Feb. 9th, I found them in splendid condition. What is the price of basswood strips for the mats per 100? I see by the mats that they are cheaper than comb-guides, and will answer just about as well, if not better, as the strips are thinner. M. B. MOORE.

Morgan, Ky., March 15, 1881.

Please let us know more about that queen, friend M., and especially whether the young queens have the same distinctive trait. It is certainly a very valuable trait in a queen. — The mat division-boards have been frequently suggested, and used, if I am correct. The only objection I know of, is the labor required to tack so many strips on, for they have to be tacked in many places in each slat, to make the board substantial. It would, without doubt, make it more like the old straw hive, in its property of keeping dry, and absorbing moisture. We can furnish the strips for 15c per hundred; by mail, 40c.

* * *

SOME NOTES FROM GEORGIA.

I HAVE been reading GLEANINGS to-day, and, as I notice no reports from Georgia (except one in Growlery) I venture a short account of my little apiary of about 20 colonies. I have been using the movable-frame hive but two years; but during this short time I have made more money, and received more genuine pleasure from my bees than from all the former period of my bee-keeping in the old way. I think I am making progress; have been very successful in introducing Italian queens; introduced 11 last year without loss; attempted to introduce one received from Hutchinson, without having water in the cage, which was the only one I ever lost. Last fall, in preparing for winter, I used your chaff division-boards and thick chaff cushions; was laughed at a little by my Southern friends, but as the winter through which we have just passed has been unusually severe, the laugh is now on the other side. *Every colony came through in splendid condition.* Even one nucleus, 2-frame, came through all right, and is now on the high road to prosperity. We are still having strange weather for this section. On the night of the first inst., all of our peach crop was killed, the mercury going down to 26°. The fig-trees were killed down to the ground during the severe winter. I have not seen a single live fig-tree in our section. The weather continues very windy and cold, ice an inch thick the first three days of the month. Corn, which was planted at the usual time, about March 10th, was killed, and the farmers are plowing up and planting over again. The apple crop is still safe, not having advanced sufficiently to be injured. The poplar (or whitewood as you would call it) is about to bloom, and as it is to us what linden is to you (a very important crop, both for honey and brood-rearing), the prospect of having it cut off indicates "Blasted Hopes." Bees have done but little for the past three weeks, as it is too cold and windy for them to fly during the greater part of the day. I have been feeding a little to keep up brood-rearing, and stocks seem strong and ready for business. My Alsike clover, now in its second year, is looking fine, and may supplement some of the bloom which has been cut off by frost. It blooms new in May.

By the way, friend Root, one of those tested queens which I bought of you last fall has now a hive *full* of the most beautiful bees I ever saw, and they are working just as well as they look too. I wish I could get 20 queens reared from the same mother.

WHAT TO DO WITH LIVE DRONES.

I suppose you will say that I should rear from this queen what I want; but during that long cold wet spell of weather, thousands of drones hatched out in some old box hives which I had bought, and I don't know how to get rid of them. How will it do to make the entrance small, so that when they get out they can't get back? Also, how would you destroy them after shutting them out? A word about bottom-boards.

BOTTOM-BOARDS OF ARTIFICIAL STONE.

Last fall a man came to my house with a load of Portland cement, and wanted to make some hearth-stones. I saw his samples of work, and concluded to let him make me one bottom-board, just to try. I gave him a pattern of Cook's bottom-board, and in a few moments he had made the best one I ever saw. It is perfectly true, will never *warp*, and is hard as granite. He molded it as we would lead. It cost 40 cents; entrance, alighting-board, and all, is one solid rock. He had a patent on his mixture, but I suppose any good worker in cement could make up the mixture with the same result. What do you think of it?
F. N. WILDER.

Forsyth, Ga., April 5, 1881.

Fastening drones out of the hives does not seem to work well; but shaking all the bees, drones and all, into a box, and then covering it with wire cloth, or perforated metal, that will just let the workers crawl out, is a practical way of getting rid of all the live drones in a hive. After the workers are all out, kill the drones with hot water, and feed them to the chickens.—Bottom-boards made as you relate have often been suggested, and, if I am correct, tried to some extent; but the objection I should have would be the coldness of the stone in cool weather. This may not, however, be a very great objection in your climate, friend W.

REPORT FROM DR. C. C. MILLER.

OVERSTOCKING.

I STARTED in the spring of 1879 with 154 colonies, and increased to 250; but, about July 4, the bees stopped storing, and, the swarms made latest remaining weak, I united down to 230, and got the last in the cellar Nov. 25th, having taken 4263 lbs. box honey. I lost not quite 4 per cent in wintering, and finished taking them out of the cellar April 3d, 1880, in fair order. Sickness and death in the family prevented proper attention, and I am ashamed to say that, by apple-bloom time, 21 more had perished through queenlessness or starvation, so that I commenced 1880 with 200 colonies. The season was a poor one, and my bees did not seem to do as well as did those of farmers 2 or 3 miles distant on either side of me. In fact, most of mine seemed to lose rather than gain, and I am strongly inclined to the opinion that they would have done much better if there had been only half as many. At the beginning of buckwheat bloom, I moved some 80 colonies 3 miles away, putting most of them on the edge of a large field of buckwheat. These gained considerably, and those left at home did better than they *had* done. Was it not because there were less of them? For the last few years I have been watching very closely this matter of overstocking, and I think it is bound to come to the front as a point of vital interest; but it is a point in regard to which it is exceedingly difficult to come to any definite conclusion. I would give considerable to know just how many colonies I can keep in my home apiary with the greatest amount of *total* profit. Looking at my experience of 1879, I should think perhaps from 100 to 150. In that season the 154 colonies seemed to do well the first part of the season, storing 4263 lbs. honey, and increasing (artificially) to 250 colonies. When the bees ceased storing, July 4, the clover was apparently in good condition, plenty of blossoms, and weather all right, and up to this time the force of bees had been increasing very rapidly. Was not the sudden stoppage of storing caused by the great increase of brood and flying bees to be fed? Still, climatic influences, of which I understood nothing, may have been at work; and I confess myself very much in the dark on the whole subject. I should like very much that those who have had experience, or who have been making close observations, would give us the benefit thereof. The man whom I have been watching with most interest in this direction is D. D. Palmer, who has kept a large number in one apiary, and, if I mistake not, said that he expected to keep 400 in the same place. Will he kindly inform us whether he has had any reason to change his views?

THE PAST WINTER.

It is not time yet (April 5) to make a full report; for with the thermometer at 5° this morning, apples will not bloom for some time. But as my report is a bad one, and perhaps something may be learned from it, I give it now. Commenced May, 1880, with 200 colonies; decreased to 162, and took 58 lbs. section honey (not 58 lbs. per colony, but the grand total from all my apiary was 58 *pounds.*) Nov. 20 to 24 I put 149 in cellar, and packed 13 in chaff outdoors. April 2d there were in the cellar 40 dead and 109 living; outdoors, 7 dead and 6 living. How many more will go I can not tell. As my average loss in wintering during the previous 4 winters was less than 2 per cent, there must be some reason for so great a change, having already lost nearly 27 per cent of those in cellar. On the whole subject of wintering, I don't feel that I clearly understand any thing *for certain;* but by talking over what we *do* know of failures, we may gain some lesson for the future. Last fall (as, indeed, all last season), forage was scarce, and my bees were within half a mile of two sorghum-mills and a cider-mill, with others at greater range. Nov. 15th the ground froze up and remained frozen; and after waiting till Nov. 20th the bees were taken into the cellar in this frozen weather. Nov. 29th I closed the house and went to Pennsylvania, not opening it again till March 24th, the thermometer having stood as low as 30° below zero, and I have no doubt it froze in the cellar. On attempting to make a fire in the stove in the cellar, I found there was in one chimney no draft, soot and ashes having stopped it. It seems as if here were reasons enough for loss; loss of bees by the thousand at the sorghum-mills, bad stores from cider-mills, bees taken in during freezing weather without a fly for perhaps 2 or 3 weeks previous, and left in a cellar without sufficient ventilation, and part of the time in a freezing condition. But all of these causes put together I do not believe were as effective as one other, and the cause of nearly all my loss can be expressed in one word,—*starvation*. True, if they had been kept warmer, less stores would have done, and some of them that starved away from their stores would have been able to reach them; but we may as well call things by their right names, however humiliating the confession may be, and let the errors of the past be so much experience to help in the future.

April 7.—I have examined with some care 25 of the stocks that died in the cellar, and find 10 contain honey and pollen, and the hives are daubed with dysentery; 3 have no honey, some pollen and the hives daubed; 1 with a little honey and pollen and clean combs; 10 with neither honey nor pollen, and clean combs. In some of the hives classed as having no honey, there was a little honey out of reach of the cluster. This does not give so many as I supposed of clear cases of starvation, but leaves my former ideas, in the main, correct.

HIVES OF DEAD BEES

should be taken at once from the cellar. Don't leave them a day, but take them out now, for every day they are left in the cellar the combs are spoiling, and will soon be worthless. Clean out the hives, clean off the combs, and keep them in the dry till needed for new swarms. If any combs contain honey, of course they should be where bees can not reach them, but not in the cellar.

Marengo, Ill., April 7, 1881. C. C. MILLER.

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DARK ITALIANS; ARE THEY CROSSER THAN THE LIGHT-COLORED ONES?

I DO not think it fair, in testing Italians, to bend the bees or place them on a window to facilitate the finding of the three bands, as I am quite sure that the worker progeny of a simon-pure Italian queen will all show the three bands peculiar to the race, as they stand in a natural position on the combs. In connection with this, they all have light rings of hair, or down, on all that part of their bodies back of the yellow bands above referred to. These rings of down are sometimes worn off from some of the bees when they have had honey or syrup on them, as in case of robbing. If the absence of these rings is caused in this way, the back part of the abdomen will present a shiny appearance. If a colony has the least trace of black blood about it, some of the worker bees will lack part of these rings of down. Such will not be shiny black unless they have had honey or syrup on their bodies.

I have two or three colonies of hybrids which show the three bands, and that without bending or placing on a window; but some of the bees in these hives lack part of the rings of down. Some of the yellow bands are somewhat cloudy, but they are there "all the same." We do not allow any drones in the above hives, as the queens are daughters of a hybrid queen whose workers were nearly all marked with the three bands—some two, and once in a while one was black. I have known some who kept Italians, and some well-marked hybrids, which latter they called dark Italians. Said hybrids all showed the three bands when we "looked for them right"—that is, bending the body, or placing them on a window, etc. I have never seen any dark Italians (that showed all signs of purity) that were any crosser than the light ones; in fact, not cross at all. No necessity for a bee-hat or veil while handling them, and I know they are better honey-gatherers, and winter better than the light beauties so much admired by some. Mr. Adam Grimm came to that conclusion years ago, for he told me a few years previous to his death, that, for profit he advised "keeping the dark Italians in preference to any others."

The above is not theory, but facts, for I have not jumped at these conclusions, as I have made bee-keeping my business for the last fifteen years, having handled plenty of blacks, hybrids, and both light and dark colored Italians; and for my use I greatly prefer the dark pure Italians to any of the others; and I am sure, when bee-keepers use a proper amount of care in testing their bees, the dark Italians will no longer have the name of being cross.

O. H. TOWNSEND.

Hubbardston, Ionia Co., Mich., March 10, 1881.

In regard to the test of purity, I would say that I know of no other standard than the Italian bees in their native home. As those from our imported queens, many of them, do not show all the bands distinctly, unless placed on a window, I consider it safe to say pure Italian bees do not all show all the bands unless so placed.

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THE REASON WHY WE ADOPTED THE PLAN OF SIDE AND TOP STORING COMBINED FOR SECTION HONEY,

INSTEAD OF TIERING UP, ETC.

WHEN we first commenced bee-keeping we used the Langstroth frame, and used what is termed the tiering-up plan to secure box-honey; that is, as soon as the first lot of boxes were two-thirds full, raise them up and place an empty set between them and the brood-chamber. To do away with the trouble of raising those partly filled, many put on two tiers at once; but the results, as a rule, are in favor of the former. The year 1870 was the first really good honey season we enjoyed after we engaged in the business of bee-keeping. When the season was over, upon footing up we found our best stock had given us, in box honey, 140 lbs. We considered this a large yield till we found that our friend Betsinger had done much better with hives adapted to both side and top storing. The years 1871 and 1872 proved to be rather poor seasons, and so our experiments were, most of them, a failure all around. In 1873 we made a few side and top storing hives, to test the matter thoroughly. At the end of the season we found we had used too many boxes, as the bees had more commenced than they could finish; still, those finished were fully equal to those taken from any of those worked on the tiering-up plan, and we had nearly as many more which were unfinished, as a clear gain. This experience convinced us of one thing, and that was, that bees built comb much faster at the sides than on top, while they stored honey much the fastest over the brood. We were obliged to arrive at this conclusion: that, if we wished to secure a good yield of box honey from our bees, we should raise the sections built full of comb, or nearly so, at the sides, to the top as fast as full boxes were taken from the top, placing the empty sections at the sides as far as possible. Thus we worked till 1877, discarding the tiering-up process more and more, and adopting the other. At this time our hives were about equal, being half for only top storing, and half for side and top storing combined. As the season of 1877 closed, we found that 185 lbs. was the *best* done by any of our colonies that had been worked with top boxes only, while three of those worked on the side and top storing plan combined, had collectively produced the large amount of 896 lbs.; one giving 309, another 301, while the third gave 286; while those stocks in our combined hive, taking the whole together, had averaged 200 lbs. each. This was a *clincher* in favor of the combined plan, and to-day all tiering-up appliances are out of date in our apiary. We now use the Gallup frame exclusively, for we have become convinced that more surplus honey can be obtained by its use than by any other; still, there is no trouble in working the L. frame on the combined plan. We also were forced to the conclusion some time ago that, if we wish to make the most box honey possible, the frames in the brood-apartment must be full of brood (*not honey, nor empty comb*) at the time the honey harvest commences; if not, the first storing will be done in the space unoccupied with brood, instead of the bees going into the boxes. We have found, from experience, that, if there is room in the brood-chamber for the bees to store from 6 to 8 lbs. of the first honey gathered, they are very loth to enter the boxes. Instead of going to work in the boxes with a will, they will crowd the queen with honey to more or less extent, whenever such conditions are present, to the end of the harvest. But let them have every available cell full of brood, and the first honey gathered will go into the boxes, thus inciting an ambition to store in the boxes rather than in the brood-chamber. To this end, if we were using the L. frame we would use but 7, as 7 L. frames give about the same brooding space as 9 Gallup. If 10 L. frames are used (as a rule), the two outside frames will be filled with honey, and bees will not travel over a frame of sealed honey to go into boxes at the sides, as quickly as they would enter them if the brood was close to the boxes—on the principle that the further from brood the boxes are, the less honey will be obtained. To sum up, if we wish a good yield of box honey, use so few frames in the hive that the queen keeps them literally full of brood, and so arrange your boxes that they come close to the brood, both at the sides and on top. As fast as full boxes are taken from the top, raise those partly filled at the sides to the top, putting the empty boxes at the side. To use friend Heddon's words, we would say of this plan, "I am not prejudiced in its favor because I adopted it; but I adopted it because I was prejudiced in its *favor*." G. M. DOOLITTLE.

Borodino, N. Y., March 24, 1881.

If I am correct, the above is one of the most valuable of friend D.'s contributions, and I do not know why so few use side-storing boxes, and raise them to the top when full ones are taken off, unless it is that it is some trouble. There is no way to get large yields of comb honey without care and trouble, that I know of; and, for that matter, *any thing else* that is really desirable.

RAMBLE NO. 4.

LAKE GEORGE, AND LAST OF THE MOHICANS.

STILL keeping our eyes upon those mountains, and our feet still upon historic ground, we ramble from our county due west into Warren county. Here, fifteen miles from an apiary, is located the lively and growing town of Glen's Falls. The noble Hudson here dashes over a barrier of black rocks, forming a picturesque fall, and a splendid water privilege, of which the enterprise of man has made abundant use. Here are located a number of saw-mills, and thousands of logs are annually floated down from the upper Hudson to feed the never-ceasing demand of the manufacturer. Glen's Falls is the head of railroad navigation. If you would travel further north you must seat yourself in one of the many stages that ply here for the transportation of the thousands of summer tourists who visit that beautiful and world-renowned sheet of water,—Lake George. Sometimes, when we wish for a few days of relaxation from the cares of home, several families will club together, hire a cottage near the lake, and spend several days in fishing, boating, and hunting. The waters of this lake are so transparent that the bottom can be seen from the boat for many feet in depth. A few years since, at a certain point, one of Burgoyne's cannon could be seen half submerged in the gravely bed of the lake, twenty feet from the surface. The waters of this lake seldom get entirelly frozen over until late in January.

We would like to invite you, friend Novice, and your wife and your children, and any number of our brother bee-keepers, even to a whole convention of them, to one of our autumn vacations here. We would guarantee you one of the finest fish chowders you ever sat down to. The ladies of our party share the perils of the deep with their husbands, and become expert fishermen—no, fisherwomen sounds better. How the children love to skim over the surface of the waters in our light boats! Wouldn't you shout, though, Master Ernest? wouldn't Blue Eyes plunge her hands into the clear water, and toss it aloft in the sunlight? How you all would make the welkin ring, and the rocky shore resound with a rousing boat song or a gospel hymn!

Although we leave our bee cares at home, we certainly see all the bee-hives around the houses we pass. Libbie—that's my better half—says I can see a bee-hive through a house, a barn, and a stone wall. That beats the Philadelphia lawyers, who can only see through a brick.

This region, we should think to be a good honey locality, from the number of hives we saw along the road. On account of the many mountains, the soil does not receive high cultivation; but the forests are filled with chestnut and basswood. The honey raised here is mostly on the old plan—in large boxes, and a market is found in the village of Glen's Falls. We are not much acquainted with the bee-keepers in the vicinity of Glen's Falls; but within the corporation, James T. Burdick has a fine apiary in Simplicity hives on the hexagon plan. Mr. B. supplies his neighbors with bee-hives, sections, etc., which the aforesaid saw-mills saw out for him, and the public are supplied with honey in the most approved shape. Mrs. B. is also becoming quite an expert in bee management, and will not allow her husband to get better posted than herself.

This region is also noted for its vast fields of buckwheat, and we find some of our friends here insisting that buckwheat honey is the best flavored honey in the world.

Near Glen's Falls is located an extensive terra-cotta works. This is made from a species of clay found here, and marl, which is found a few miles north. Some have broached the idea that this species of earthenware can be used for bee-hives; but we think it has never been tried. This is a good opportunity for some patent-hive man.

Here at these falls is located one of the scenes in one of those admirable works of fiction by J. Fennimore Cooper, "The Last of the Mohicans." At the foot of the cataract is located the famous cave in which the heroes of the story defended themselves. Now, some one told us, or we imagined that this cave ought to be full of bees and honey, like those California caves where tons of honey could be taken out. After much difficulty we clambered down the rocks, at the imminent danger of falling headlong into the whirling waters below. We entered the cave, but not a bee nor pound of honey greeted our eyes. The shape of the cave, coming to a point above, would be a good place for bees to cluster and commence their work; but we fear they will never occupy it, as the spray is thrown in showers over the entrance. So, farewell to the last of the Mohicans.

Hartford, N. Y., April, 1881. J. H. MARTIN.

Thanks, friend M., for your kind invitation, but we have a very pretty lake near home, and, what always interests me. is a swamp of yellow flowers at one end of it. I once located a hive of Italians near this, and had the pleasure of seeing them store honey when bees everywhere else were rapidly using up their stores.

Ladies' Department.

FLOUR FEEDING INSIDE OF THE HIVE.

HOW I wish you were here to-day, so that I could take you by your coat-sleeve and lead you to a hive which has "Bully" chalked on in front—expressive, if not in good taste. I would take out the cushion, and you could look down into the wooden feeders covered with glass, one containing dilute honey, the other unbolted flour, which are placed right over the brood-nest, and tucked around with woolen carpeting to keep in the heat. You would there see bees loaded up with white balls on their legs, and many at work, while the other feeder is almost deserted. No natural pollen. Snow upon the ground in places yet, and now raining. "What shall the harvest be?" MRS. L. HARRISON.

Peoria, Ill., March 28, 1881.

Why, Mrs. H., you have actually solved the problem of getting bees to take flour without flying out-doors. I have just been telling Mollie. in the Juvenile Department, what girls might do, and I begin to think I should have said women too.—You will need to be a little careful that the bees do not store more flour than they can use, and have it harden in the cells. It has also been suggested that pushing brood too rapidly, so early, has a tendency to start spring dwindling. I wish you would give us reports regularly from this hive with that chalk mark on it. L. C. Root and some others think it best to let the bees alone until nearly into May, and I have sometimes been inclined to think they were pretty nearly right.

SOME COLONIES CONSUME MORE THAN OTHERS; SOILED COMBS, ETC.

I am an A B C scholar, and highly prize the patience you manifest, and the plain manner in which you explain some of the crooked things concerning bee-keeping. I began 3 years ago with one swarm of black bees. Increased up to 31 last fall; the winter came on early and severe; I was consequently late in getting them packed (as I pack in chaff on summer stands.) March 10th I unpacked them to see what condition they were in, and found I had but 17 colonies left, all but one of which were in good condition. I cleaned off bottom-boards, and repacked. Those colonies that died were mostly afflicted with dysentery; a few seemingly starved with plenty of stores in the hive. One or two, I am sorry to say, had eaten up every bit of honey, which proves to my mind that some colonies consume more than others. How can I clean comb which has been soiled by dysentery, so I can use the comb for extractor? Which pays better, to use extractor or section boxes? JENNIE WALCOTT.

Berlin, Ottawa Co., Mich., March 15, 1881.

I am very much obliged, friend Jennie, for the credit you give me of being kind and patient, for it is an awful big mistake. I am not half as good as most of you give me credit for being. For example, I had just begun to declare I would not tell how to clean empty combs another time; but on the whole I think I will, and if you find the same thing over and over in this journal, you must just think it was because every friend who writes asks it now until I have got demoralized, and keep telling it over and over. No housekeeper in the world can handle honey equal to the bees themselves; and before I thought of putting the combs in the extractor, if they are anywise suspicious looking or smelling, I would put them one at a time in the middle of a strong colony, and let them fix and cleanse them up, all sweet. Then you can extract the honey, if you wish; but I think I would prefer to use all such comb for building up new stocks, and extract the new honey. I can't tell which will pay best in your locality. Every bee-man or bee-woman will have to test their own market in this respect.

HOW THE WOMEN WORK WITH BEES IN NEBRASKA.

I have often thought I would like to tell you something about Nebraska for bees, and that report from Pawnee City sets my pen going. That town is only about 20 miles from Tecumseh, but Mr. M.'s bees (perhaps they were blacks) seem not to have done as well as mine. Bee-keepers in this part of the country say that the last two years have been very poor for honey. I can not judge, for my bee-keeping commenced in May, 1879. I bought 4 swarms of Italians, one hybrid and two black, one of them weak, in box hive; got a neighbor to help transfer it and show me the queen, as I knew nothing about bees. Borrowed "Langstroth on Honey-Bee," sent for A B C, GLEANINGS, etc. During that season I increased the 7 to 30, besides losing 4, three of which absconded, on account of ants probably, and one strong natural swarm ;which gave me the slip by getting a queen-cell tucked in some corner where I missed it. I took 50 lbs. box honey and 150 extracted. Of course, I made mistakes, and could see when too late where I could have done better; for instance, about the 20th of Aug. I extracted all the honey from some hives. A dozen others, equally full, I left for box honey, and got but 50 lbs., when, if I had thrown it out of their combs, they would have filled up in ten days, as the others did, and I could have taken it again the 1st of Sept., for they kept gathering honey till nearly the last of the month. I left them on summer stands with no protection, except quilt over frames; lost 6 swarms, but they were some that had small chance for their lives, although they each had 60 or 70 lbs. of honey. I had used some hives with only loose covers or boards laid over, and, in a rush of other things, afterward neglected to get covers made. One year from the time they were bought I had sold, of bees and honey, all that the 7 cost, and had 18 swarms left, which I increased to 60; sold $12.00 worth of queens, and took 1500 lbs. of extracted honey. I never fed them except on rye flour in March. It was so dry, and honey so scarce in July, that the bees would not take care of all the eggs from the best queens. Then I ought to have fed, and would if I had thought of it. I worked all the time with them from the 15th of May to the 20th of Sept.; went through every hive twice a week, and nearly always found something that needed to be done. I think bees can be made to do much more by changing frames from center as soon as full, and by keeping close watch, to right any thing which gets wrong. Making swarms seems much easier to me then hiving natural ones, even when they alight on the lower limbs of an apple-tree, as I had a few do. My way is to take a frame of brood that is nearly ready to hatch, and covered with bees from each of three hives; put them in a hive, and after a day or two give them a queen-cell, or, if a queen, cage her for two days, which, after losing several, I concluded was the safest way. Enough bees would remain with those that hatched, to make a nice young swarm. I always work with bee-veil and gloves fixed so no bee can get in, which I think the better way, for ladies especially; then they are safe, and need not feel nervous. I seldom use smoke: open a hive slowly, and let it be a minute or two before I move at all, and then not too quickly.

Last fall, of course, I did not dream of such a winter, for we never had any thing like it, therefore did not protect the bees. The last time I examined, I had lost over half of them, and expect to lose more. They have not had a flight since early in November; but if I had lost them all I should say, "try again," for I believe Nebraska is one of the best places in the world for bees. Usually, they begin to gather pollen in March, and they can live and increase all spring and summer on forest and prairie flowers. We have as yet but little clover. Heart's-ease and other wild flowers give our honey harvest from the 1st of Aug. to late in September, and our winters are dry, with very little snow. I think the bee business is very interesting, and much better for the health than being confined indoors. MRS. J. N. MARTIN.

Tecumseh, Neb., March 10, 1881.

Very well done indeed, my friend, and your resolution not to be discouraged, but to try again, even if you lose them all, is one that some of our older ones would do well to copy.

Juvenile Department.

I AM a little girl 9 years old. My name is Cora J. Sawdey. I sent my photo to Blue Eyes two years ago; it was taken standing with my doll's carriage, and one doll in it, and one sitting in a chair by the side of me. I go to school at Poolville. It was out last Friday. I attend the Methodist Sunday-school at Earlville. My papa has got 77 colonies, or did have last fall; he is trying to winter 42 on summer stands in chaff hives, the rest in a bee-house made for that purpose. I claim two or three of them, and mamma two. You see that makes papa's number smaller. Papa gets mine mixed with his so much I can't hardly keep track of them. I can tell one of them, for I have my name stamped on the front of the hive. I guess I shall have to mark the rest of them in the spring, if I can find them. Papa says it is a hard winter for bees. It has been 32° below zero here. CORA J. SAWDEY.

Poolville, Mad. Co., N. Y., March 7, 1881.

Very good, Cora. If I were you I would have my name written on the hive in great big letters, so that everybody who comes to your house would know which are your bees. Many thanks for the picture of yourself and the dolls.

I am a little girl 12 years old. Papa keeps bees. We had 56 last fall, but lost 6 this winter. Our bees are in pretty good condition this spring. Papa uses the Langstroth frame. He gave me a hive of bees the other day. ANNIE SIGGINS.

East Hickory, Forest Co., Pa., March 29, 1881.

Very good, friend Annie, for you and your father too. Let us hear how much honey you get from your hive.

Seeing so many letters from the boys and girls, I thought I would not be behind. Now, in the first place I don't know but it would be as well to say that my brother takes GLEANINGS, and likes it very much; but I don't think it would be as well to waste a great deal of time over unnecessary talk, so I will "speak my piece" and step out.

Well, what I had to say was this. Last summer, I think it was, my father was "looking at" the bees, and mother, being very much interested in them (more than she has been since), took her sun-bonnet, and, being unwell, a stool also, and started for the bee-yard. Arriving there, she placed her stool (not very near the bees, I assure you) and sat down to witness the operation. But I think my father witnessed the funniest operation, when, a few minutes after, he heard a noise, and looking up, saw his good wife, cricket in hand, coming for the house at about the rate of half a mile a minute. But the sun-bonnet—oh! where was that? She found it a little while after out in the yard. She also found a sting in her hand, and she didn't lose the swell of it either for as much as a week. Well, I presume when mother sees this letter she will think I have wtitten enough for this time and on this subject too; so, promising to write again if you want me to, I will close. I am 13 years old. JULIA R. TUTTLE.

Hampden, Hampden Co., Mass., March 26, 1881.

Here is your book, Julia, but are you sure it is just the thing to be making sport of your mother's mishap? She might take the stool and chase after *you*.

I see some letters from very young bee-keepers. I am older than the most of them; my age is 15. In the spring of 1880 my brother, who is a bee-keeper, and has 30 colonies of bees, gave me a swarm of hybrid bees in a Langstroth hive. I was to attend to it myself; so when they filled the first set of surplus boxes I had no more to put on, so I had to make them. I presume you will laugh to think of a girl making 2-lb. section boxes. I made them all myself, and got 48. lbs. of honey. I help my brother look for queens. I look on one side of the combs while he looks on the other. He lost 3 colonies out of 33 this winter. Mine are all right so far. Nearly every bee-keeper about here has lost all, or nearly all, his bees except us. My brother takes three bee papers, but I claim GLEANINGS as mine. My brother got 100 lbs. of comb honey from one hive. We all like the Home Papers. MOLLIE E. CANOLES.

Hereford, Baltimore Co., Md., March 14, 1881.

Well done, Mollie. Yours is a tip-top letter for a girl of 15, and there are lots of grown-up bee-keepers that haven't done near as well as you and your brother. Your example of making the boxes yourself, when you could not get them otherwise, is an excellent one for all of us. That is just the way to learn to be independent of circumstances. I know girls can do a great many things that people often think they can not do, and may be that is just the reason I always have so many of them working for me.

I am a little boy five years old; and mamma says I may print a letter to you, and tell you all about our nice fields of snow; they are so pure and white, real little mountains of snow, too, and the high fences play hide and seek in them, while my two sisters and I go over them with our coasting sleighs; and the snow even hides papa's two-story chaff hives, and when he shovels it from the entrances we can just see his hat above the snow! Last summer the bees stored but little honey; and they have not had a fly since the tenth of last November; and papa says "many poor little bees have perished this long winter." My papa loves to care for his bees. I do not attend school, but study reading, writing, spelling, figures, and music, at home; I can play "Hail, thou long-expected Jesus," on the organ, and some exercises. We have a pet bird that sings nicely, and will fly to our hand when we call him. He likes mamma's house-plants very much — I think as much as we like GLEANINGS. I help papa with the bees, and on the farm. I will tell you what I can do, the next time I write. I am tired now.

JOHNNIE E. OLSEN.

Nashotah, Wis., April 4, 1881.

Very good, Johnnie. If I am not mistaken, you are the youngest one in our class that ever wrote me a letter. We send the book.

My pa takes GLEANINGS and keeps bees; but we don't get any honey. Some of our bees are in Root, and some in Parker chaff hives. We have not lost any yet, and pa says if it should be a good season we will have lots of honey. We have lots of snow and mud, and can't go out, because we have had the diphtheria. I have not been out-doors since the 17th of March. I am 9 years old. My sister is 7 and brother Karl is 5. We had a little brother Ralph 3 years old, but he died of the diphtheria on Sunday, March 27th. Gracie and I go to school and to Sunday-school when we are well enough. Pa says the reason he don't write to you as other bee-keepers do, is because he would be put in Blasted Hopes; but he don't look like Mr. Lake.

HARRY LAWRENCE.

Bloomington, Ill., April 8, 1881.

Thank you for your good letter, Harry. Tell your pa if he has lost no bees in wintering, he is certainly not a "Blasted Hoper." Poor little suffering Ralph has gone, and I can well imagine the sorrowing hearts that he left in that little home circle. Weep not, for he has a home in heaven, where you will all meet him, if you do right and love God. Be kind to Gracie and Karl; read the little book to them we send, and try to make your mother happy. She feels the loss of the dear little one more than you or I, perhaps, know any thing about.

MRS. LUCINDA A. HARRISON'S TALK TO THE JUVENILE CLASS.

LESSON SECOND.

I'm caught in a trap, just as many a mouse before me has been, because we didn't think. I had no idea of writing any more to you when I quoted, "Thus endeth the first lesson." Will Mr. Root and you let me off with a story—not a "make believe," but an "o'er true tale"? I was at Cincinnati last fall at the bee meeting, and, by the way, children, while I think of it, Mr. Root was there, and he is like Uncle Ned—"has no hair on the top of his head, the place where the hair ought to grow."

I like to talk, and my tongue is like the man's cork leg, that, when it got to going, he couldn't stop it; but when it is run down I listen to other people. Mr. Hays was there; I presume he is a relative of the ex-President, for *presidents*, you know, have so many kin folks, and they both live in Ohio. I wanted to ask him if he wasn't, but I didn't. I was too bashful. It does not matter whether he ever had a relative in the White House or not, as he is a bee-keeper, and, what is better, an amateur bee-keeper (that is, one who keeps bees for the love of it, or, as we say, for recreation, which means for play.) Mr. Hays is a lawyer, and stays in an office among books, and writes; and people come there to ask about law, and some are filthy fellows who chew and smoke tobacco, so that he needs fresh air and sunshine, and seeks it by playing with his bees. They are queer pets, are they not?

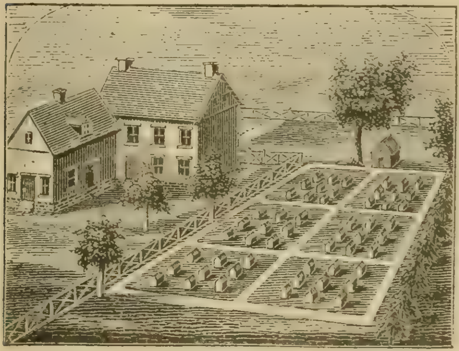
Most of you children have a dog; and when you come home from school he is glad all over; rolls over and over, capers around, jumps upon you and kisses (you may call it licked) with his tongue; but it is his way of kissing; he don't know how to pucker up his mouth. Mr. Hays has a little daughter who runs to meet him, glad all over, when he returns, and, taking hold of his hand, says, "Now, papa, we will go and work with the bees." He has other little daughters, but they don't care any thing about the bees; and I doubt if they love him as well, as they are not interested in the same way. This one is always his companion when he is in the apiary, helping him and asking questions. She said that she would like to have a swarm of bees, and her papa gave her his *best* swarm. All papas would not have given her the best as he did, but some poor little one that was good for nothing. After awhile she wanted to have two colonies, and her papa told her that her swarm was large enough to divide and make two, and she did it herself, just as she had seen him do. Isn't she a dear little girl? I'm so sorry that her papa didn't bring her to Cincinnati with him, for then I should have taken her in my arms and loved her, and kissed her in aunt Lucinda's sweet place, which is under her chin, where no one else ever thought of kissing her.

Who will tell me next month who are going to take care of the bees when those are gone who are taking care of them now? MRS. L. HARRISON.

Peoria, Ill., April, 1881.

FRIEND PHELPS' APIARY.

YOU have frequently expressed a desire to visit the homes and apiaries of your many friends and subscribers. With your many and urgent duties, that would of course be an impossibility, and it remains for us to do the next best thing; i. e., send you the homes and apiaries — on paper. Inclosed, find a rough drawing of my apiary, showing also a rear view of my home, etc. The arrangement of my hives may interest some of your readers.



APIARY OF W. G. PHELPS, GALENA, MD.

They are laid out in blocks of 9, six feet apart from center to center, with entrances facing inward. A 12-foot center avenue runs the entire length of the apiary, with the honey-house at the upper end. Intersecting this at right angles are similar avenues which communicate with outside ones. Each hive in each block is painted a different shade from its fellows, and run in colors from light red to pure white. Thus any confusion among the bees is avoided, and each can easily mark his own dwelling. The apiary, likewise, presents a very attractive appearance from the street, which is always a desirable point. A cedar hedge protects the apiary on the north from the wintry blasts, and a large apple-tree affords a delightful shade for the honey-house in summer. Last year I planted grapevines in front of each hive, with a view of shade; but the intense drought killed ¾ of them. I shall try it again. Hitherto, tomato-vines well trained on trellises have proved excellent protection for my bees, but it is some trouble to renew them year by year. My bees have wintered finely, and *without the loss of a single colony*, which, considering the mortality every where, is very flattering to my methods of management, packing, etc. I have many items in reference thereto which would doubtless interest your readers, and I may give you some of this when I have leisure.

Galena, Md., March 1, 1881. W. G. PHELPS.

HOW AN A B C SCHOLAR MANAGES.

I BOUGHT the bees that I asked your advice about, and am well satisfied with them so far. I moved them to my home on the 2d day of March, and found only one stand dead; they had starved to death, as there was not one cell full of honey in the hive. I cleaned the combs all out nicely and hung them back in the hive for a new swarm when they come out. I have taken the 6 empty gums and made frames for them, so that I can try my hand at transferring when it is time. I had 6 wagon loads of fine coal cinders hauled, and laid off two seven-hive apiaries as directed in A B C, and made a mound of cinders about 8 or 10 in. high under each hive, and put a strong thrifty Concord grapevine to each mound. I have ordered a load of sawdust, to go in front of my hives, and also my scantling, 2x4 in. for the trellises. I have made one chaff hive from dimensions in A B C, and it is something of a curiosity around here, as none of the bee-men have ever seen any thing like it. I have also made me a honey-knife like the pictures in your circular, with blade 15x1¼ in.; is that too large to be handled with care? I also made a Simplicity cold-blast smoker that works like a charm. I don't know but I can smoke the bees clear off the place with it. I shall try it if they sting me much, I assure you; but I hope I shall not have to use it at all.

I have 14 stands to commence with, and only 4 of them in movable-frame hives, and I presume that the combs are built in all directions in those 4. Eight of the others are good box hives, with two boxes in upper story, some thing like the Farmer's honey-box. Would you transfer them, or would you fill the upper story with frames for this season, and get what you could out of them? I want to adopt the chaff hive altogether as soon as I can; but, as you say, I want to "go slow" until I see my way clearly. I don't think that I am out any thing yet, as my bees are alive, and working every day that is warm enough, and I could sell them to-morrow for more than they cost, if I would, but I am going to have a little fun myself watching them work this summer, if it is the Lord's will.

Union Mills, Pa., Apr. 7, 1881. TIM. CALVER.

Well done, friend C. I think your honey-knife a little large, but it may be all the better, if you get used to it. I would by all means transfer them if I had time and wanted to learn. As long as you can sell out so as to pay all expenses, you are on safe ground.

LAST season I told you of the progeny of a black queen that was up earlier in the morning on the Spider plant, than any of the Italians. Well, we had another black colony that, for a time, seemed to equal any stock in the yard, and the queen did about as good business in filling the new fdn. with brood as any I ever saw. Do you wish to know what the point is of all this I am saying? It is this: When I find another such queen, I am going to keep her; and if you think there is danger of getting hybrids if you send your orders to me, send them to somebody else. I am going for the most energetic queens and bees I can find; and if I lose my queen trade, I shall be happy raising honey. The most of our queens this season will be reared from our red-clover strain, probably. Of course, we do not propose to let such black queens as we choose to tolerate, rear drones.

Heads of Grain,

From Different Fields.

CHAFF HIVES VERSUS SIMPLICITY, EVEN IN SOUTH CAROLINA.

I SEND you my experience with chaff hives *vice* Simplicity, to show you the difference in this climate. In the fall of 1879 I had two colonies of Italian bees that tallied the same amount of surplus that season, the amount being 93 lbs. comb honey per colony. Wishing to try chaff hives in this mild climate, I made one according to directions given in your A B C, and transferred one of the above-named colonies to it in November, first weighing the frames and honey of each hive, so as to give them the same amount of honey. Each colony came out in the spring of 1880 in good condition, but the chaff hive did not consume as much of their honey as the one in the Simplicity. The consequence was the colony in the chaff hive commenced brood-rearing much earlier in the spring than the one in the Simplicity; however, the one in the Simplicity was strong in bees before the first honey in the field was ready to gather. Now, those two colonies were run for extracted honey, and below you will find the result.

The colony in the chaff hive gave me 132 lbs., and cast two swarms; the one in the Simplicity, 87 lbs., and cast one swarm—a difference of 45 lbs. and one swarm. As extracted honey is worth 12½ cents per lb. here, and a swarm of Italian bees $5.00 without the hive, we have a difference of $10.62—a pretty good sum I think.

Now, Mr. Root, I would like to have you or some one else explain why bees, unprotected from the sudden changes of temperature, consume so much more of their stores than when they are packed up so as to prevent sudden changes. W. S. CAUTHEN.

Pleasant Hill, Lan. Co., S. C., Jan. 25, 1881.

It is very simple, friend C., is it not? The honey in cold weather acts as fuel, and therefore the better the protection, the less fuel will be needed to keep up the temperature. Is not such the case with all other stock?

THE CARE OF SURPLUS COMBS, ETC.

Mr. G. M. Doolittle said, in one of his letters to GLEANINGS, that all straight worker combs are the sheet anchor of bee-keeping. Will he please inform us through GLEANINGS how he cares for his empty combs and keeps them from being destroyed by moth worms in warm weather? Will tarred paper answer to cover the floor of a honey-room? Will the smell of the tar affect the honey? Will bees clean combs in which swarms have died with dysentery? and is it safe to put new swarms in such combs? Can you inform me how to put sweet corn in tin cans so it will keep? E. D. HOWELL.

New Hampton, Orange Co., N. Y., March 19, 1881.

If I am correct, friend D. always has bees enough to cover his empty combs by the time the moth is liable to injure them, say in May and June.—I should be a little afraid of the tarred paper. Use the untarred sheathing.—Your question about combs from bees that have died has been asked and answered so many times I begin to almost fear some of the older ones will begin to complain at so much repetition. The combs are just as good as they ever were, to put new swarms on, no matter if they are soiled and filled with bees. Give a new swarm a chance at them, and see. All experiments that have been made seem to determine, also, that, after being thus worked over by the bees, they are just as good for another year.—Canning corn is a trade of itself, and is pretty sure to be a failure in the hands of a novice. Better evaporate it or dry it.

DOES IT PAY TO PACK BEES IN CHAFF OR COTTON SEED IN TEXAS?

I answer, it does. I packed my bees in cotton seed, and I had the pleasure to-day (March 28) of hiving the first swarm of bees around—a full peck or more of bees—over 50 nice queen-cells, and thousands of drones. I have kept bees about 15 years, and never had a swarm come out before the 10th of April before. I have my hands full now; remember, every tenth swarm is the Lord's and will be so marked. The Judas-tree gave us a fine yield of honey from Feb. 20th to March 20th. The apple is now in full bloom. All other fruits have shed their bloom. The dewberry is beginning to bloom, and soon we will reap a rich harvest from this, as it affords plenty of nectar. The Cyprians, although first to commence brood-rearing, are making no preparations to swarm. The December-mated queens (Cyprians) are doing good service; from small 3-frame nuclei they have 6 frames of brood and 4 frames of honey, all made since Feb. 2d, the day they began bringing in pollen from the elm. Apiculture is receiving more and more attention every year. All bee-keepers ought to be temperance men. Our bees would not sting us half so hard if we were. I threw the old pipe *whirling*, but you need not send me a smoker. I have quit the pipe for good, just as I did whisky ten years ago. B. F. CARROLL.

Dresden, Texas.

Nevertheless, friend C., you shall have a smoker too, and may God be praised for the stand you have taken.

TEA AS A HONEY-PLANT, ETC.

Many in this State and Georgia raise tea for home consumption. I can not say as to its honey-producing qualities (as mentioned in March No.), but should think it might be a good honey-producer. The flower looks very much like that of the strawberry. I will also state that a lady in this State is growing coffee successfully. Some of the berries were sent to the Department of Agriculture at Washington, and there tested and pronounced good. The premium offered by the Commissioner of Agriculture for the first pound of coffee raised in the U. S. was then paid to her. I see no reason why we can not raise most of the tea used in this country, after we have once invented a process for curing it by machinery instead of by hand, as they do in China.

New Smyrna, Fla., Mar. 28, 1881. W. S. HART.

INDIVIDUALITY IN BEES.

During the last season I had a little experience which was new to me, and as I don't remember to have seen any thing in the books about it, I give it for the purpose of drawing out the experience and observation of others in the same direction. One swarm—hybrids I call them (possibly they are pure Italians),—hived July 6, 1880, after filling their hive below, they went up into section boxes, and continued to work in them more or less all the season, making in all 38 lbs. of surplus in section boxes; and when it was taken off in the fall, I found the entire lot to be white-clover honey of the most delicious character, while the honey from the remainder of the hives was mixed—some clover and some fall flowers, as goldenrod, thistle, etc. Fall flowers were quite plentiful, and the most of the hives left the white-clover pasture for "other fields and pastures new." Why didn't this colony also? Is it possible to breed a race of bees with individual peculiarities so marked? If so, some of your vineyardists' neighbors ought to try to develop a race that will not like *grape juice*. EUGENE SECOR.

Forest City, Iowa, March 21, 1881.

You are correct, friend S., in your observation in regard to individuality among bees. Similar cases have been known heretofore. This brings out a valuable point, and we are glad you have called attention to it. Who can say more?

AMBER CANE.

The main thing is to get it started; after it once gets a start it grows very rapidly. Have your ground newly plowed, so as to give the cane a chance with the weeds; and to give it a still better chance, have your seed sprouted; dampen the seed with warm water, and keep warm until the sprout makes its appearance. If the weather is favorable, it should be up nicely in three days after planting.

In answer to inquiry on p. 36, Jan. No., I would say, our apiary has been located for two years within one mile of a cane-mill, and we have had no trouble with bees bothering the mill. If you will clean your evaporator every morning with sulphuric acid and water, in equal quantities, you will find it will improve the color of your syrup, and it beats the old plan of scraping the deposit from the pan, all to pieces. M. L. HUDSON.

Charles City, Ia., Feb. 16, 1881.

BEES DOING WELL OUTSIDE OF THE HIVE IN COLD WEATHER.

In November, 1879, I drove through the country in my one-horse express. I stopped in Stanlyville some time in the afternoon on account of a severe snowstorm and cold wind. I stepped into a shoe-shop; and as I am known as the "Bee-man," the subject of conversation soon turned upon the honey-bees, by some man telling me he had heard I made "bee-kings," and sold them. Another man living near there said that his father's bees had never swarmed in 10 or 12 years, but they build all over their hives on the outside. I expressed my desire to see them, and he kindly accompanied me to the bee-yard, an old-fashioned shed. The only access to the bees was in front. Soon the old gentleman joined us, as he had seen us come across lots; however, he was so hard of hearing that I could not get much satisfactory information concerning this wonderful looking hive. They were box hives, about 1 foot square by 18 inches high; they were suspended in a sort of rack about 15 inches from the ground; no bottom-board; the brood-combs extend within 1 inch of the ground; the combs were very black; might have been several years old. Upon close inspection I found the whole colony packed away in this comb, looking like a big round ball. The top of the ball did not reach the hive proper by about 4 inches. I opened my eyes wide. Here was a nice swarm of bees in the open air, so to speak, clean and snug, no dead bees lying around. Very little comb was built in front of the hives, but the sides and back of the hives were finely decorated, at least to a bee-keeper's eyes. The combs were built regular and straight from the roof down, from 2 to 10 inches wide, and about 3 feet long; nice white comb, both worker and drone comb partly filled with sealed honey. If all the combs had been well filled, they would have weighed 200 lbs. or more per hive on the outside. R. STEHLE.

Marietta, Ohio.

Thanks, friend S. From the reports we have had during past years, I can readily understand how this may be; but how about robbing, when there comes a season of scarcity? Are all colonies so strong that they defend their honey when out in the open air, with no sort of a hive about it? Friend S., I will pay your expenses in going to see this same apiary again, just to see how the bees stood this past winter. Who can guess, now, boys, in what condition he will find it? If they have wintered well, will it not help friend Kendel's idea of ample ventilation?

WINTERING TWO COLONIES IN ONE CHAFF HIVE.

Friend Root:—We have experienced the severest winter to our memory. Our bees were confined to the hives 8 weeks, the longest period we ever knew. The cold weather began earlier in the season than usual; but, fortunately, like friend Merrybanks, I had my bees all prepared nicely for winter before the cold weather came. I went into winter-quarters with 14 colonies, 10 in 5 chaff hives, arranged as described on page 577, Dec. No., and 4 in a tenement hive of my own make. I have not lost any yet, for which, you may know, I am thankful, when I tell you that about 80 per cent of the bees in this vicinity, that were left to take care of themselves, have "gone where the woodbine twineth." J. P. MOORE.

Morgan, Ky., March 14, 1881.

The plan alluded to by friend M., is dividing the two colonies by a division-board made of slats similar to our comb-guides, and in this case, at least, it seems to have answered all right. I would warn those trying it, however, that if your division-board, by warping or carelessness, should permit a single bee to get through, one of the queens will be sure to be killed.

It ought to be a crime for anybody to trouble a man who is as busy as you seem to be in the bee line. When a man is in trouble, it is a relief, sometimes, to talk with others about it. I have read GLEANINGS and the A B C you sent me, and I have been blowing and talking A. I. Root management ever since. My next neighbor is a man 65 years old, and has always kept bees, and his father before him. He says, "*I don't believe a word of it.*" I tell him any man ought to be knocked down on the spot to dispute almost any theory upon any subject nowadays. I gave him the A B C to read, and it has "laid him straight," and his exclamation is, "I do not know what this world is coming to." The trouble is, my neighbor had 20 hives, and I had 15, and all of them in splendid condition, and very strong swarms the first of last December. My neighbor took one course with his and I another. He let his stand out (as he says old-fashion), and they have taken the blasts and storms of this uncommon winter, and lost them all but one swarm, and that is a good one. I saw it yesterday. I tell him they were frozen to death, as they were mostly dead the first of March; and in regard to my own, I built a snug tight house or covering, double, and stuffed it with short straw, and during mild sunshine would open it, and the 1st of March my bees seemed to be all right, with no indication of loss. I let them out for a fly the 5th of March, a beautiful sunshiny and warm day, and it seems they all came out and had a fearful emptying of themselves. Since that time, March 5th, they have dwindled and died, and have all died but three swarms. They are strong and all right. Now, then, my conclusions are: my neighbor's bees ought to have died, every one of them, for the want of care, and they have except one; and my own, what shall I say? Not a storm of any description has touched them; only the hard frosts of 20° below zero almost all winter, and that they all lived through; none of either lots were short of honey. The question is, why have my bees died so? I do not ask you to write me, but I inclose you a shinplaster for some thing that will tell or explain it. We live in a country where white clover and basswood abound. Your management of bees is certainly wonderful.

G. A. Leggett.

Schodack Landing, Rens. Co., N. Y., April, 1881.

Many thanks for your concluding remark, friend L. I confess it is "wonderful," even to myself; for I have "managed" about 140 colonies down to about 25, more or less. When the sun comes out again, I will try to tell you exactly. I feel just now as if I would rather do something with bees that wasn't wonderful, if it would result in teaching this great A B C class how to keep them over from fall to spring without losing any. I should be very glad to be "troubled" by any and all of you, if I could be of any use in the way of an adviser.

MARKING QUEENS TO TELL THEIR AGE.

One of your correspondents suggests marking queens by painting their backs different colors, corresponding with different years, to know their age; and for the benefit of those wishing to mark their queens so they can always tell their age, I will describe a plan that will do it all times without fail: As soon as your queen begins to lay, clip her wings on one side only, which will prevent her from ever flying again, as well as to clip all; next season, as you are overhauling your bees in the spring, catch the queen and clip one of the remaining wings, which shows this to be her second season, and the next season clip the remaining wing; or, in other words, clip a wing every season until all are clipped.

It is no long job, usually, to find them at this season of the year; and if you do not find them readily, mark the hive and try again the next time you look them through.

DRYING SWEET CORN ONCE MORE.

We think we are a little ahead yet for nice dried corn, which we prepare as follows: Pluck your corn while in full milk; then draw a "hetchel" (made by driving 5 or 6 sharp-pointed carpet tacks through a thin piece of wood so the points stick through from ⅛ to ¼ in.) over it until all kernels are broken open; then with the *back* of your knife you can scrape out all but the hull, which will all be left upon the cob. To dry, spread upon dishes thinly, and set in a moderately hot oven—hot enough to scald. Stir occasionally until dry. The above saves the trouble of boiling, of exposure to flies, and is quickly dried and taken care of. The only fault we can find is, it is all gone weeks ago. If you wish, we will tell you how to prepare corn for "corn oysters." We think it is one of the best dishes to prepare from corn.

F. H. Cyrinius.

Scriba, N. Y., April, 1881.

Many thanks, friend C. Your plan of marking queens is given by Langstroth, but we have found it unreliable, as so many queens get their wings mutilated, from different causes, especially after they get to be a year old or more. Your suggestions in regard to drying corn are excellent, and I know from experience they will prove valuable. Our mammoth sweet corn is now such a magnificent dish, if I may be allowed the expression, that I have desired Sue (my wife, you know) to give me her recipe for cooking it, and I am a going to have it printed on a thousand little paper bags, and next fall each bag is to be filled (1 lb.) preparatory to being placed on the 10c. counter. If we can get it put up equal to that we have now, I shall expect it to retail for 10c per lb. about as fast as Eliza can pass the packages over the counter. Perhaps not quite so fast, but I shall expect every one who buys a package to become enthusiastic on the corn business. Send us your recipe, by all means, friend C. Young man, raise corn. Don't "go west," but raise corn where you are, and then—dry it.

COMMENTS ON DOOLITTLE'S COMMENTS.

1. If the bees that are robbed do not go with the robbers, where do they go?

2. The comparison between a bee and a cow is too large, and proves too much. We kill cattle for food, but not bees. They are God's "creatures as much as the cattle"—not ours. I believe he notices every bee that we kill by our carelessness. I do not stop to think about the profit, when trying to save their lives.

A. A. Bradford.

East Jeffrey, N. H., April, 1881.

EXTRACTING OLD HONEY, ETC.

Can cards of sealed honey that have remained in the hive several years be extracted so that the combs can be used again? What per cent, if any, will remain in the comb after extracting? At what temperature must the honey be to flow freely from the combs?

I started into the winter with 64 stocks, mostly in the Langstroth hive; have but 44 left; they have stood on their summer stands, but in a sheltered position, which is one reason why I have not lost as many as my neighbors have. I started five years ago with one swarm; have sold and given away 4; all descended from the one; they are the black bee.

R. Meatyard.

Ellicott, Erie Co., N. Y., March 27, 1881.

Some old honey is quite difficult to extract, especially if it is partially candied in the combs. Sometimes you may not be able to get out more than half of the honey. Of course, the weather should be as warm as possible, without melting or softening the combs, so they will be liable to break down. I think I should use such old combs for building up new stocks, and let them take out this old honey for rearing brood, and get my crop of extracted from the new. Bees will manage candied honey without trouble, in the summer time.

REPORT FROM MRS. AXTELL.

We are losing largely in our bees this cold winter; 50 colonies are already dead, and probably many more will die; but "the Lord gave and he taketh away; blessed be the name of the Lord." We do not feel that we have any right to feel one murmuring thought, neither are our hopes blasted in respect to the bee business; for if the Lord gives us strength we will see how much we can make out of the remaining ones, as they all belong to him, not to us. Those in the cellar seem very quiet, and have, as far as we can judge, wintered well; but it may be the quiet of death, as the weather is yet too cold to set them out. D. D. Palmer, of Sweet Home, says his are all dead, and he wants to sell all his hives and combs. Mr. Scudder, of same neighborhood, had only 30 left out of 180 some three weeks ago. Our queens last fall, it seemed to me, did not fill their hives with eggs as heretofore; consequently colonies were weak. SARAH J. W. AXTELL.

Roseville, Warren Co., Ill , April 15, 1881.

WHAT ARE OLD COMBS WORTH TO WORK INTO WAX?

What had I ought to pay for old comb to work into wax?

Bees have wintered very well in this part of Maine, although it has been the hardest winter known for a number of years. C. M. JONES.

Solon, Somerset Co., Me., April 8, 1881.

This is a very hard matter to answer, friend J. It depends very much upon whether the combs are new, and mostly wax, or whether they are largely made up of old cocoons and propolis. New white combs are almost all wax, but oftentimes the old tough ones are scarcely ¼ part or even less of wax. I know of no better way than to buy a few and see how you come out. If you do not get wax enough to pay for what you paid, and the trouble of rendering, you will have to pay less next time. I am very glad indeed to hear that bees have wintered well in one northern locality.

WATER FOR BEES IN WINTER.

Mr. Langstroth says that in the winter, 5 out of 6 bees die for want of water. I have a "patent" of my own for watering bees. It has saved my bees for several winters on their summer stands. I claim no patent. I break up chunks of ice and lay them on the frames. The heat of the bees will melt all they want to drink. JOHN CLINE.

Watson, Effingham Co., Ill., April, 1881.

I hardly think bees die often for want of water, unless they are confined to stores of candied honey. The matter is one that needs looking into, without doubt; but most of us feel as if our greatest difficulty was in keeping the bees sufficiently dry. No doubt they melt the ice, but this assuredly chills the cluster, by so doing, and I should greatly fear it would harm them, unless the colony were very strong, or the pieces of ice very small.

CELLARS AHEAD.

I feel about as much like going into Blasted Hopes this spring as I ever did, and perhaps you will think best to put me there. I have kept bees, or had the care of them, some 40 years; and during that time have had ups and downs, losses and crosses and disappointments; but none have inflicted a wound deeper than in the present case. Last fall I had 123 swarms, all in good condition, as I supposed; 20 swarms were Italianized with choice queens of my own raising, from 4 nice queens I took from the woods (that made it seem all the better, you know), and what was better yet, the young queens were all right and purely fertilized late in the season by drones kept for the purpose. But to the point: Of the 123 swarms, I sold 24 last fall and the fore part of winter; of the 99 left, I have lost all but 29, including 15 of my choice queens. I think I shall lose down to 19 swarms. Here let me say, my bees were put into a building prepared for the purpose, about the middle of January. My building was prepared thus: 8 in. of sawdust on the outside, 8 in. straw on the inside, all well packed. Why didn't my bees winter better? Others have lost from ¼ to all. Cellar wintering is ahead here. H. F. NEWTON.

Whitney's Crossing, N. Y., April 12, 1881.

I think you are right, friend N., in deciding that good cellars are almost the only sure winter repository, in a winter like the past. It is quite a difficult matter to make any building frost-proof during such weather, unless it is at least partly under ground.

DRONE-LAYING QUEENS.

I have one queen that won't lay any thing but drone-eggs. What must I do with her? Must I kill her and raise another one? I have taken all the drone larvæ from her. Was that right? She was a fine queen last year, and I lost one queen; but along came a starved-out swarm, and I took care of them, "you bet." Almost all of the bees here are dead. I was the first man that ever used a frame hive here, and everybody is watching me. One says, "You will kill your bees." J. W. TRAYLOR.

Mt. Joy, Delta Co., Tex., April 9, 1881.

The best queen in the world, friend T., is liable to turn drone-layer at almost any time, and there is no better way than to kill them, that I know of. Removing the drone comb from the hive will be of no avail, for she will lay in worker comb all the same. Either give them another queen, or remove all the brood comb, and give them some good brood to rear another queen from. You were fortunate to find a runaway swarm, to put into your queenless hive just in time.

INTRODUCING QUEENS.

I had a call last fall to go 50 miles from Wenham to introduce some Italian queens. I wanted to introduce them and return to Wenham the same day. To make quick work of it, I prepared some introducing cages as follows: I made a 1½-inch hole in a piece of wood 2 inches square and half an inch thick; nailed a thin piece on one side to keep the bees in, and wire cloth on the other. I cut a slot in one edge clear through to the cavity and filled it with home-made sugar candy. The bees were in movable-comb hives, and the frames were covered with thin quilts. After removing the queens from the hives, I placed the introducing cages on the frames under the quilts, and let the sugar come directly over the opening between the frames, so the bees could get at it and release the queen. The result was, the queens (8 in all) were all safely introduced. Can any one do better? H. ALLEY.

Wenham, Mass., April 14, 1881.

TO PREVENT SWARMING.

As a good many have lately inquired how to prevent swarming, I will tell how I prevented it, or, rather, circumvented them after they had swarmed. This may not be a very important subject at this time, as most honey-growers are probably anxious to have all the swarms they can this season. Yet there will be some who may have more swarming than they wish—especially late in the season. In this locality, where we get most of our surplus in the fall, it is generally best to let each colony cast one swarm; but it is the August swarming we wish to prevent. The plan I have practiced for the last three years is this: I hive the first one that comes out. The second swarm I unite with the colony that sent out the first swarm, and so continue, always uniting the last swarm with the colony that sent out the last preceding one. I have done this when several swarms issued the same day. It is not necessary to cut out the queen-cells, but it may be well to do so, especially if you do not expect the next swarm to issue before these cells could hatch. When all are done swarming, the last colony can be united with the first swarm. I like this plan much, as it prevents increase, and yet gives each colony the vigor of a new swarm. It is well to give more room at the time of uniting, even though the new colony is not larger than the one that previously occupied the same hive. E. S. EASTERDAY.

Nokomis, Mont. Co., Ill., April, 1881.

LEAVING SECTIONS ON ALL WINTER.

YOU ask for some brother who has had an experience with sections on all winter to stand up. Well, as I stand 6 ft., I will say, "Don't do it." I have been keeping bees here for 5 years, and never lost a colony in winter or spring until this winter. Last fall I left a few boxes on one hive for the bees to carry the honey below. When I examined them in February I found them dead. They had consumed every drop of honey in those sections, and then starved with about 30 lbs. of honey below in the body of the hive. My neighbor, Mr. Gibson, had about 20 colonies with sections on most of them, and every one of them died. I gave a stock last summer to an old friend, and he left the sections on two tier high, and lost every bee before Jan. 1st. Now, don't make the change in the A B C you speak of until you have tried it for *three winters*. My experience for five winters justifies me in putting an enamel cloth *down tight* over the frames, with a six-inch chaff cushion on top. My bees came out all right every spring. Should you want my plan of wintering, I will send it.

Bees are wintered on summer stands five inches from the ground. H. D. CUTTING.

Clinton Mich.

There, "that is just as I expected, and always thought it would be." 'Twon't work, and we have got to give it up. But hold on, friend C.; were those colonies packed in chaff hives, and were they such as had given good yields of honey the season before? Were they good strong stocks on old tough combs? You see, I do not like to give up such a wonderfully easy way of doing things. You almost make a body think that friend Kendel's colonies that came through thus only wintered well in *spite* of unfavorable conditions, eh?

Later:—The following is just at hand from friend Kendel:—

Having just read your comments and suggestions upon our report on page 171, April, 1881, we are very strongly reminded of our various experiences of the past 24 years with bees. We started about 1858 or '59 with a box hive, purchased of the venerable beekeeper, E. T. Sturtevant, who divided it for us and transferred into 2 L. hives. They did well, and we ran up to 5 or 6 hives. We always wintered out of doors in the poor (not good) old careless way, sometimes losing a hive or two in wintering, but never lost one, except where the cuts in the old honey-boards were closed. We would usually leave the 6x6 boxes on all winter, which usually were quite empty. It seems to us now, as we think back, that, with this course, bees would not fly out every time the sun thawed the snow a little; and, in fact, they do not now when we do not have them perfectly air-tight above, nor do we think they begin brood-raising out of season, which in a measure necessitates their flying out for water when it is too cold for them to return. We know that many old bees will crawl out in comparatively cold weather, and die; the same would probably die and blockade the entrance if they remained inside, but there are not many serious losses of bees in their prime. When they fly out and become chilled before they can return, colonies will sometimes become almost depopulated in a few hours. If by slight top ventilation you can thus keep them quiet until suitable weather for brood-raising, and then cover snugly, and stimulate by feeding, should we not in a great measure overcome the dreaded "Spring Dwindling"?

Cleveland, O., April 5, 1881. A. C. KENDEL.

In April GLEANINGS you wanted to know some thing about leaving sections on all winter, and said, "Now, has anybody else (besides A. C. Kendel, page 171, last No.), ever been guilty of leaving the sections on all winter?" In this neighborhood the people raise their honey in boxes, and they all invariably leave them on all winter, and claim that they do better than any other way. Last year I had my comb honey built in small frames extending crosswise over the brood-frames (L. hive), and these frames were 6 inches deep, and long enough to reach across the hive. Over the top of these frames I put a cover, leaving it entirely open between the two sets of frames. Now comes the point: six hives have been left that way all winter, and they are in splendid condition; in fact, they are stronger than those that had quilts on top of the bottom frames. I closed the entrance of the six hives so that only one bee could pass at a time. I think I shall winter all mine that way next winter. CHARLES KINGSLEY.

Greeneville, Tenn., April 8, 1881.

Seeing an article in April GLEANINGS in reference to sections left on all winter, I would say, a neighbor has wintered all his without protection, with caps left on (empty). Every one to-day is extra strong, while I, who thought I was doing right, took caps off and put quilts on; caps were glass to hold about 7 lbs.; hives (Quinby's simple movable comb) sitting side by side; mine are all weak, his are all strong; mine were the better in the fall. We have had only 12 days that bees have flown at all.

E. LADD, JR.

Beverly, Macon Co., Mo., April 5, 1881.

On page 171, April No., you say if there is such an individual in the company, let him stand up. I will stand up long enough to answer your question. In the winter of 1876 I left the sections on five stocks as an experiment; they wintered well, but no better than others. Two of those stocks had their sections left during the spring. The result was, they did not breed up as fast as those that received better care. I have tried leaving the sections on twice since, but can not think I gained a single point by it. The past winter I left an extracting-top filled with honey on a strong stock. They left the main hive, and moved upstairs where I found them this spring in fine condition. About that idea you kept so long: Do you want us to believe that you held it over thirty days? H. T. BISHOP.

Chenango Bridge, N. Y., April, 1881.

In April GLEANINGS you gave a statement of bees having wintered well where sections and cases had been left in hives above the frames or brood-nest, same as during the honey season, and ask if others have had bees wintered in same way; if so, "let him stand up." Now, my dear sir, I would like to obey, and "stand up;" but I have been so severely afflicted for years, I can not; but as I recall, you can not mean me, but the other man. My father, Rev. J. B. Miller, did not get his bees all cared for before winter set in, and five colonies were left with all the sections on during the winter, and they are on yet, April 20, 1881. Of 30 colonies wintered, but 3 were lost, and but few, if any, are as strong as these five. They wintered in chaff hives bought of you two years ago. To-day they fly strong; are very busy gathering off the little now offering for the busy workers. A part of these filled their sections once last season, and partly the second time. One of them sent out a strong swarm May 3, 1880, that made 40 lbs. of surplus honey in section boxes; another a swarm May 4, that did well; but no record was kept of how each colony did. So much for the 5; but were they really neglected? Many bees in this locality died during the winter; some of dysentery, but more from starvation. Who next?

Alliance, Ohio, Apr. 23, 1881. JESSE MILLER.

Notes and Queries.

I HAD 15 stands of bees last fall, 12 of them in L. hives. I have lost 3 of them. Three that were in chaff hives are all right. This winter has been a hard one on bees; half of them are dead now. S. L. DENNISTON.

Peoria City, Polk Co., Ia., March 14, 1881.

My bees wintered almost without loss; but the springing is horrible. N. A. PRUDDEN.

Ann Arbor, Mich., April 19, 1881.

Dear friend:—I tell you, the cellar is the place to winter bees, and no more words about it! C. R. MILES.

Pawnee City, Neb., March 26, 1881.

My bees are still all alive, but a few of them are weak. I had some mixed oats and rye flour out for them to-day. I counted 60 bees, loaded, enter their hive in one minute—one a second. S. M. MOHLER.

Covington, Ohio, Mar. 18, 1881.

THE NEW GRAPE SUGAR.

The grape sugar came through all right on the 7th. It is very nice—I think better than the sample you sent me a year ago. The bees take it readily, and seem to enjoy it hugely. B. BOTH.

Port Allegany, Pa., April 11, 1881.

I started to winter 4 swarms, but lost one with dysentery. The rest I am feeding maple sugar, and I think they are doing finely. I have had but little experience with bees, but find that I can work with them without any difficulty. G. W. WOLF.

Clayton, Mich., April 11, 1881.

NEW HONEY.

On March 14th, from 5 hives I took over 150 lbs. willow honey from upper stories, since which I have transferred to L. hives, and increased to 12, all very strong. W. W. WILSON.

San Bernardino, Cal., April 6, 1881.

COTTON-WOOD FOR HONEY, ETC.

The winter has been long and cold, but at intervals bees have had a fly, and, in chaff hives, have wintered well. Some will lose heavily; all out of chaff will lose some. I have 27 in chaff, all in good condition so far. Bees here gather both honey and pollen from cottonwood in as dry a season as 1880.

Arvada, Jefferson Co., Col. R. H. RHODES.

POLLEN FROM SKUNK CABBAGE, ETC.

I went into winter-quarters with 22 swarms; have 21 left; almost all of them now are pretty strong in numbers; they have been carrying in pollen from skunk cabbage for the last 8 or 10 days when the weather would permit.

JONATHAN D. HUTCHINSON.

Windsor, N. J., March 18, 1881.

PLASTER CASTS FOR FDN.

In my description of the plaster casts, I said, take 2 parts plaster and 3 parts sand; but I have found, after working the machine a while, that the sand don't help the casts. I believe it makes them harder; but after working the machine awhile, it becomes rough, and makes the fdn. imperfect.

Cicero, Ind., April 16, 1881. ELIAS BERG.

As to the bees, I am short just 10 hives out of 93; lost most of them by their coming through queenless, and had to unite them. So far as I can learn, most of those who did not give their bees winter protection have lost heavily, some losing all they had. J. MATTOON.

Atwater, O., April 16, 1881.

WINTER QUEENS.

We see a little in GLEANINGS about winter queens. There is one in our "yard" that made her appearance last February that *we* think can get away with any of Doolittle's summer queens; and when she can not have just what she wants, she can "pipe" louder than "Henderson's best."

E. M. HAYHURST.

Kansas City, Mo., April 4, 1881.

We have had very bad luck with our bees this winter. Some men have lost as high as 123 swarms. I am a new beginner, but I made $9.00 from four swarms, after paying for the hives, in one season; but the honey the bees gathered this last season was of a very poor quality; it was thin, and no substance to it. Two of my swarms ate as much as 40 lbs. of honey apiece. GEO. W. DEAN.

Shelbyville, Allegan Co., Mich., April 18, 1881.

THE SIMPSON PLANT IN COLORADO.

I send you a few seeds of the only figwort plant I have seen in this county. It has been watched for the last three years. It commences to bloom about the first of June, and from that time to about the first of September there will be from 15 to 30 bees on it constantly, "from early morn till dewy eve." It seems to me no plant can be more valuable for honey. It grows very bushy, and not over 18 inches high; comes up from the root every year. Last season it had no rain nor irrigation, and continued in blossom two months. CHAS. E. MCRAY.

Canon City, Col., April 18, 1881.

[It appears to be the regular plant such as we have, friend W. With cultivation, I think it would grow as ours does, from 4 to 7 feet high.]

RED CLOVER, ITALIANS, ETC.

My bees being Italians, why did they not work on red clover, as there were 40 acres or more in this neighborhood? Why did I not get any surplus when those who kept blacks around me did? What will be the best way to get my bees pure again, as they are now hybrids, and my pure queen is dead, and most all the bees around here are blacks? I suppose I can't do it until there are no more blacks here, can I? OTTO G. JOSENHANS.

Owosso, Shiawassee Co., Mich., Mar. 21, 1881.

[Red clover, like most other plants, sometimes fails to yield honey. If the blacks got honey from it, and your Italians did not, why try to have your bees pure, friend J.? Keep on with your hybrids. I am inclined to think it was because your Italians were weak, and the blacks were very strong, if such were really the case. You can rear pure Italians, no matter how many black bees are around you, if you choose. See "Italianizing" in the A B C.]

We are having by far the worst snowstorm of the season. Hill, of Mt. Healthy, has not lost one stock; has 112; since 1868 he has lost not one in wintering! and he uses my hive, and has always had over 80 stocks. L. L. LANGSTROTH.

[Do you see that, my friends? Friend Hill has reported all along his system of wintering (chaff packing, etc.), and now friend L. reports that, with toward a hundred colonies, and 112 this year, he has not lost even one colony since 1868. There may be a mistake in the figures, and friend L. may have meant to say 1878; but even then I doubt whether we have another man in the United States, if we have in the world, who can say that. Is it accident, think you, for so many years in succession? Now I will tell you: Let us go next fall and see friend Hill, and learn his secret. Would we not make a fine bee convention if we should bring our baskets and give him a surprise party?]

MR. MERRYBANKS AND HIS NEIGHBOR.

A CHAPTER THAT TELLS SOMETHING ABOUT GETTING DISCOURAGED IN BUSINESS, AND GIVING UP.

PERHAPS some of the friends would like to know why the town in which Mr. Merrybanks and his neighbor lived was called Onionville. Well, I have thought for some time I would like to tell you the story; and as there is a good moral in it that seems to be quite in season just now, I think I will tell it.

Near the site of the town there had for many years stood a tract of low swamp lands that never produced any thing but wild swamp-grass, and was considered by all of no value particularly, for any purpose. Finally, some eccentric youth took it into his head that, by a system of underdraining, etc., this land could be so reclaimed as to raise good crops. This piece of foolishness, so the neighbors said, he got from some papers or books, or some other like impracticable nonsense on which he had been wasting his time, when he would have been better employed at work like the rest of them. He did not argue the point with them much, but very quietly went to work and tried the matter on a small scale; and, as luck would have it, his first venture happened to be on onions. The crop was excellent, and the demand good; but he still kept quiet, although he did a vast amount of thinking, and studied those foolish books and papers more than ever before. The next season he had his plans matured and ready for business. He rented, at a very moderate sum, perhaps 5 acres of this swamp land, and with a force of picked men he went to work letting off the surplus water by means of open ditches. Every thing seemed to favor him, and in due season rows of bright green onions, as straight as the streets of a city, rose up before the astonished gaze of the people; and the clean culture, with the bright green contrasting against the background of the black soil, made a sight that was worth going miles to behold; and, in fact, people did go miles just to see the beautiful sight. Did they all give up, and admit there was some thing in book-farming after all?

Well, some did, but a great many did not. Some who knew from experience what a crop of onions might be expected from a growth as was there before their eyes, declared that the whole United States could not consume so many, and that his crop would bring them down so that onions would not be worth 10 cents a bushel. Our friend still kept still; for, in fact, he could not afford to waste valuable time in argument. He just minded his own business. In due time, the bulbs began to show themselves, and when the crop was beginning to ripen, he was still on the ground, curing them and preparing them for market in the best manner. Not a weed had been allowed to grow in the whole plat, and the sight was almost as grand in the fall as it was in June and July. Where in the world will he put them all? In due time they found out. With wagon-loads of boards about a foot square, and like loads of cheap lath, the same hands that cared for the growing plants in a twinkling reared pyramids of cheap boxes, or shipping-crates, and soon the whole enormous crop of over 2000 bushels was not only safely shipped to a distant city, but a sudden demand for a nice article of onions so turned things in his favor that they sold for about $3000.00 cash, and our hero was owner of the whole tract of land, and had money in bank besides. Onions, onions, onions, was the cry everywhere, and the next year everybody went to raising onions. Losing sight of the fact that our friend had not only secured the very best ground for the crop, but had put his whole life, soul, and *brains* into it, they expected to do likewise. I need not tell you how they failed; you have, most of you, seen it. They were too lazy to pay the price of the crop that he paid for his. Now, the saddest part of it comes yet. The next year he went to work to do the same thing over again. Of course he could do it again, if he had been all through it, and had done it once. But he didn't. I do not know whether it was that so much success had spoiled him, or whether it was accident that favored him so much the first year; but I do know that, as I drove past his place in the fall of the next year, I saw him idly sitting on an empty basket in the middle of his field, with a single hand with him, and this hand also was sitting down in the rich black soil, doing nothing. The onions had failed in a great many places; and where they had not, they were small in size—some of them not larger than hickory-nuts. Worst of all, the ground was covered with weeds. Our friend, a young man, just in the prime of life, looked like the fellow in the back of the A B C book, who sits on a bee-hive, with a shingle saying, "For Sale," sticking on a stake beside him. All his enterprise and energy were gone. Could it really be my friend of the year before?

I got out of my buggy, and went over into the field. Said I, "Boys, why do you not gather these onions, and get them off to the market?"

"They are so small it won't pay; besides, they won't bring over 25 cents a bushel."

"Why, my friend, 25 cents a bushel is better than nothing. Fix them up nice and send them off."

He laughed a sort of sickly smile, crumbled some dirt in his fingers, and sat there in misery. Of course, he was in misery. Anybody is who sits down on the bottom of an empty basket and says, "It won't pay."

I plucked a little one, and rubbed the skin off. It was beautifully white and nice, and all at once it came into my head that these were exactly the thing for the little onion pickles we buy so often at the groceries.

"Look here, my friend, you can save yourself yet by making these small onions into pickles. I have paid 40 cents for a quart bottle of them, over and over again, and if you will just work the thing up you can make as good pickles as any of them."

"I haven't got any bottles."

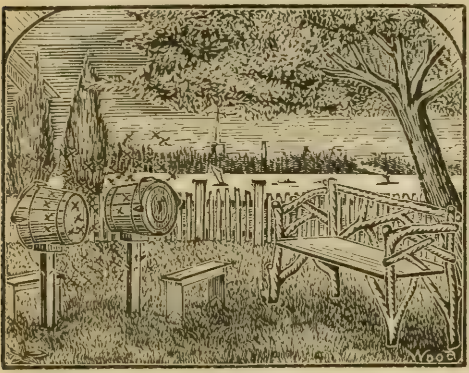
"But you can get bottles at a little expense. There is plenty of time for you to put up some samples. Take them or send them around, and get orders." And as I saw the acres of nice small onions scattered about, it seemed to me just as if I would like no better fun than to go into this pickle business. But he didn't, and I have since heard that he has become a bankrupt and gone to Texas. The success of that one season has very likely ruined him for life.

Well, now you know how Mr. Merrybanks came to live in Onionville.

Well, Mr. Merrybanks wintered his 25 colonies with the loss of only two. His neighbor wintered his 20 colonies, and *saved* only two. More than that, he was out of work, and had been for some months. While brooding over his misfortune of being out of work, and almost out of bees too, he smoked almost incessantly, and his tobacco bill was getting to be quite a little item, especially where there was no income. His good wife took in washing when she could get it; helped some of the near neighbors to clean house during the pleasant spring months; sewed carpet-rags, and did every thing she could think of to keep up appearances, and have John and Mary at least half way presentable when they went to Sabbath-school over to the little church, and hoped and prayed for better things. Yes, prayed for better things. She had never belonged to any church, for in her childhood she had hardly known what want was. Years had made changes. She was far away from her former home and friends. None seemed to care for her or their family particularly, unless it was kind-hearted Merrybanks. To whom should she go in her trouble? In one of Mary's little Sunday-school books she had read of answers to prayer; and from that, in her late trouble she had taken to reading her Bible.

"Come over and see our pail bee-hive." This was the salutation that caused the family to look around suddenly one May morning; and as they did so, they saw friend M. at the open door, and John just behind him, with a smile on his face almost as broad as the one we saw when he had climbed down out of the tree with that swarm of bees. John's father arose in a sort of listless, absent way, but Mary and her mother got their things with a cheerful willingness that showed they expected to see some thing pleasant at least, and all followed John, who could hardly restrain his impatience as they crossed the road over to their neighbor's a little beyond. Under the broad spreading limbs of a large apple-tree was a rustic seat where John's father and mother sat down. At a little distance two stout stakes had been driven, so that their tops were about two feet above the ground. On the top of each was a common wooden pail, laid on its side in a hollow cut in the top of the stake. To keep it in place securely, a piece of hoop iron was nailed to each side of the stake, so as to pass over the pail. To keep the pail from getting loose by any possibility, after it was crowded tightly into the hoop attached to the stake, a couple of tinned tacks were pushed into the wood, back of the hoop. The hollows in the tops of the stakes were so made that the bottom of the pail stood exactly perpendicular.

One of the pails had an entrance made through the bottom of it, like the pail hive we saw put inside of the barrel. The other permitted the bees to pass out just under the glass circle that closed the hive like the one we saw down by the fence, and oh! but the bees were working on the apple-bloom, and carrying in loads of honey and pollen.



MR. MERRYBANKS' PAIL-HIVE APIARY.

"Why, Mr. M.," said John's mother, "there are more bees going out and in from these pail hives than from your large chaff hives; why is this? Can it be they are stronger in this small compass?"

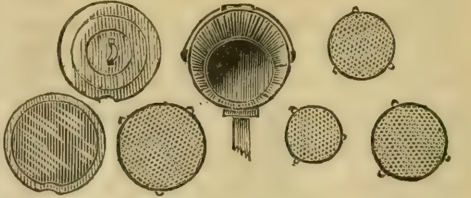
"They are not as strong, ma'am, but you see their hive is in a circular form, and fewer bees are needed to keep up the required temperature to keep the brood from chilling, and the hives are really tighter, so far as cracks and crevices are concerned, this time of the year, than even the chaff hives."

Just here John's father roused up a little and interposed, "Why, neighbor M., if the bees should all die, as mine have done, the pails would be just as good as ever, with this kind," pointing to the one where the bees came out of the mouth of the pail; "and if combs were melted up, one would have nothing left on his hands but those hoops with the rings on them, and the pail covers, which certainly can not cost very much."

"The hoops to hold the combs can be made for about 3 cents each; and as only five are needed for a hive, the whole cost, including the cloth-lined glass, will not exceed 25 cents, and such a hive is all we shall ever need to raise queens and bees for the market."

"Mr. M., Mr. M.," said John, as he shook him by the arm, "just show them how easy it is to open the hives."

"All right," said our friend, and he sat down in front of one of the hives, on a low seat made on purpose, and after blowing a very small puff of smoke into the entrance, he drew out the cover, then twisted or rolled the glass a little, to sever all wax fastenings, and then gently drew it out and laid it down. You will observe, that the minute this door was drawn back the least bit it was perfectly loose, because of the flare of the pail. The first comb presented a view of many cells filled with various colored pollens, and new honey. You will observe, from the cut, that friend M. has dispensed with the arms to the frames, and uses, in their stead, three wire rings, soldered to the metal hoops which hold the combs.



THE PAIL BEE-HIVE, WITH THE COMBS REMOVED.

These rings are placed at such distances on the hoops that the two lower ones support the weight of the honey, while the upper one guards the top of the comb from striking the pail and mashing bees, and the three rings at the same time prevent any comb from being pressed so close to the one back of it, as to injure the bees. Friend M. took hold of these rings, turned the combs slightly, and it lifted out without even the slightest jar. The comb was hung by one of the rings on a bent nail placed in the stake, and the whole five were quickly taken out in the same manner. After they had been examined, and the queen duly admired, as she kept on with her work of swinging around in circles, the whole were quickly replaced, and the door was gently pushed into its place so as to push any bees clustered on the inside of the pail, before it.

"You see," said Mr. M., "I have no mat, enameled sheet, burlap, or any thing of the kind to fuss with, before putting the cover of the hive on, and yet not a bee is killed, for I can see plainly through the glass what it is doing, as I crowd it back into place."

"But," said John's mother, "will not the rain beat in around the edges of the cover? or, in other words, will this pail hive do to stand outdoors like this, even in the summer time?"

"Why, madam," said friend M., "if the rain should beat in, do you not see it would run right out again? See! the bottom of the hive slants outward, and, so far as I have noticed, no rain has ever gone beyond the outer tin cover."

Here John's father knocked the ashes out of his pipe and listlessly picked up the cover, exclaiming,—

"Why, this is nothing but a common tin pot-cover, painted green. Why do you use tin in place of wood?"

"Because it will neither warp, twist, nor shrink; and, on account of its perfectly round shape, will always close the mouth of the pail against the weather and inquisitive robber bees, who might be prying around the cloth-lined edges of the glass circle."

"Mother! mother!" and John shook his mother's arm to attract her attention, "don't you believe Mr. M. has promised to make me one to put right through my window upstairs, where that glass is broken out, so I can look at the bees all the time while they are at work. It is to be just like the one he made for Mr. Root, that he has got in his greenhouse. But won't it be fun?"

Well, I declare, my friends, I shall not be able to get to the point in the story where friend M. gave us his ideas about feeding; and next month I hope to be able to tell you how God answered John's mother's prayers.

Our Homes.

Behold the Lamb of God, which taketh away the sin of the world.—JOHN 1:29.

MR. ROOT:—I do not wish to complain, but simply to make a fair, unvarnished statement. My employer is perhaps paying me all he thinks I am worth to him; but I am not satisfied with what I am getting, simply because I am not making a living for my family. I have a wife and four children to support, and if I make $7.00 per week I have only $4.00 left after paying my board away from home; and if I go home Saturday nights on the cars, as I have had to lately, because of sickness in my family and bad roads, that takes out $1.30 more, leaving for my week's support of a family of five, less than $3.00 per week. This barely buys them food, leaving nothing for fuel, clothing, or, in case of sickness, medical attendance. Of course, I could stand this for a limited time, but for a limited time only. My clothing is about worn out, and unless I can earn more I shall soon be obliged to stay home from church and all public gatherings, simply for the want of decent clothing to wear; and more, I shall be obliged to keep my children from Sunday-school for the same reason. It is hard, but I do not know how to help it. You with a riper, richer experience, may be able to point me out some plan for my improvement. I should like to stay and work where I am, could I live and support my family by the closest economy; but my employer can not afford to pay me more than I am worth to him, and I should not wish him to. Could you not help me into some thing better? I write this, hoping that you may advise me in some way, point out a way, or suggest some thing by which I shall better my condition. I am willing to work any where, either go on the road, or any place where I could make the most for him and myself. As I am proud as well as poor, and extremely sensitive, you will do me a favor to keep this communication *strictly confidential;* and if you can point out a way for me, or assist me in any way, I shall be very grateful. If I were *alone* in this matter I should not think of bothering you with a statement of my circumstances; but with loved ones and helpless upon my hands, I am compelled to look out for them. How to do it, or which way to turn, are riddles to me as dumb as the Sphynx in Egypt's land. I sometimes feel that God made a mistake in my creation, and at such times long for death, could I be sure of either utter obliteration or peace on the other shore. Are these feelings foolish? I know they are wicked, but hearts o'er tried know not reason, but only desires. It is easy to wish to be, but hard to be always good. Oh this ceaseless fight with the "wolf at the door"! will it never end? I sometimes feel like Cain, that "every man's hand is against me."

X. Y. Z.

Although I may not be able to help you, friend X., there is One who can, and with pleasure I point out to our opening text. It is He who says,—

Hitherto have ye asked nothing in my name: ask, and ye shall receive, that your joy may be full.—JOHN 16:24.

I know how many there are who have grievous burdens like your own to bear, and I know how many there are, too, who feel that their prayers have not been answered. A few days ago, at our noon service, I asked the boys and girls which is the most grievous of the sins that mankind are addicted to. The first answer was, a want of trust; the next, selfishness; another said pride; one more, a lack of faith; and in a few brief moments these young people told pretty correctly just what the trouble is with you and myself, and all the rest of us. Our friends and neighbors can tell us where we lack, every time; and one of the lessons we are to learn is to be willing to be corrected by those about us. I am glad you have come to me in this friendly spirit, for it indicates a willingness to be told of your faults, and a sincere wish for improvement. One other point in your letter I like. You say you do not want your employer to pay you more than you earn, and that you think very likely he is paying you all he can afford to. This is good too, for it drives you back on yourself, and on your own resources. When you kneel in prayer, you are not praying that God may send you money without an equivalent, but that he may open your understanding, and give you wisdom, that you may make yourself worth more to your employer.

If I am correct, you would have the matter stand some thing like this: You wish, by your own efforts and industry, to make yourself so valuable to the one for whom you are working, that it will be felt and realized to such an extent that, in due time, instead of being obliged to hunt for situations, people will be coming after you, and trying to make engagements for you, before your time has expired. Then when somebody has made you a better offer than the present one, and you, of course in a manly way, inform your present employer of the fact, he replies something like this:—

"I declare, X., it seems to me I am paying you about all I can afford; but if you have a chance of a better place, of course I must either pay as much, or let you go;" and he sits down meditatively, and sums up your dollars-and-cents value. We will, if you please, make him think out loud: "Let me see. X. is one of the best hands I have got; is always at his post promptly every morning at 7 o'clock; if he ever does absent himself, I always have notice of the fact that he wishes to be away, so I am never kept waiting and expecting him every moment for a half-day or more. He does not drink, nor use tobacco, nor am I ever uneasy as to his whereabouts on Sunday, for he has a class in the Sunday-school. I declare, these three single items are worth more than I ever thought of, until I am compelled to think of losing him, as the matter stands just now. He is a beautiful and rapid writer. Come to think of it, whenever I want a nice letter written to some large firm, with whom I am anxious to stand well, some way I always give it to X., without hardly thinking why. I have other nice writers, but some way they are not accustomed to business, or do not think what they are doing, and make some ridiculous mistake that upsets the whole of it; and, worst of all, is pretty sure to upset me too. If any of the clerks are sick, X. has the run of the business, enough so that he can take it up and carry it along, or overlook a new hand if I should be obliged to set one at work. Another thing, he seems to love his business. I often catch a smile on his face when we have made some lucky hit in advertising, and orders begin to pour in like smoke. He has a knack, too, of getting low figures on goods. Just one more thing occurs to me right here. It is only once in a while we find a clerk, especially among the younger ones, who keeps a constant bird's-eye view, if I may express it in that way, over what he is doing. Suppose interest is to be figured; X. would at a glance form an idea in his own mind *about* what the result should be, before his computations are completed, and thus throw out an error, almost, as it were, by intuition. One who cultivates the faculty can learn, in time, to guess almost to a dollar what a column of figures will foot, before the addition is made. Again, X. is extremely industrious. In passing him a dozen times a day, I always find him busy, and his hands moving rapidly. He never stops any story or discussion because I come along, and I never find him, out of idle curiosity, looking at the work which belongs to some one else, in working hours. I know he is interested in new books as they come out, and the new inventions of the age; but he never stops his work to examine them, without asking me, and I never find him discussing them or arguing over them during working hours.

"Now, while I think of it, X. has always been a good friend of mine. Why, he has more than once pointed out to me the fact that I was selling certain articles for less than it cost me to make them, and did it, too, in a respectful way, and not at all in a way that implied he thought he knew better how to run my business than I did. I declare, I did not know before how much I have been depending on him. Still one more thing occurs to me just now. He seldom argues points with me. Very few people like to admit they are wrong, and it is not every one who will confess himself at fault when the matter is pointed out to him. I presume we are all too much disposed to think the fault all on the other side, rather than that we have done anything amiss. X. has a fault in being forgetful, sometimes. Once when he had forgotten the same thing twice, may be three times, I spoke a little impatiently perhaps; he gave me one of the best rebukes I ever had. Shall I tell you how he did it? He said,—

"'Mr. Brown, I have been careless, and now if you will just give me a scolding every time I make this mistake, I will pretty soon learn not to do it any more.' I finally softened down my face, and laughingly promised to do just as he said, but he has never made the mistake since.

"I declare, it does not hardly seem as if my business would stand it to pay —— a week; I am in debt —— thousand dollars now. I can get plenty of men for what I am already paying. Yes, I have had offers without number almost, to hire pretty fair writers at a dollar a day, but for all this I am pretty sure X. is the cheapest hand for me, even at what he has been offered."

You see, my friends, I am only guessing at the circumstances, and projecting you forward, as it were, to indicate roughly the way in which you may really earn more, as you say you wish to. Am I making a picture too near perfection, and requiring more of poor humanity than it is as an average capable of? Very likely I am, as humanity stands unaided; but with Jesus' help, with the opening text before you as your motto, it is all easy. The first point I mentioned was being early at your post promptly every morning. Very likely this one point will require much earnest prayer, simple as it is. If you are not accustomed to it, a thousand apparently real obstacles will stand in the way. Go to bed early, as I told you last month, and push through them. Our city and town people need to learn a lesson of the farmers in this respect. Stop going out evenings, unless it is to your weekly prayer-meetings, and then be sure you are at home and in bed by 9 o'clock. Satan may tell you that, unless you attend the lectures and read the papers you will grow up in ignorance of what is going on in the world; but just make up your mind that ignorance is better than being behind hand and in debt. Be as prompt in going to church and Sunday-school as you are in getting to business week-days. If you are going to ask God to help you, you must be consistent, and show him by your daily life that you are really striving to obey the command,—

Seek ye first the kingdom of God and his righteousness, and all these things shall be added unto you.—MATT. 6:33.

Remember,—

God is not mocked; for whatsoever a man soweth, that shall he also reap.—GAL. 6:7.

In regard to the clothes, I would go to the places of worship any way, with such as I had, and trust God to enable me to get better when I could. At the noon meeting, one of the hands said *pride* is the most grievous sin that afflicts humanity, and I am sometimes tempted to think he was not very far out of the way. It is a glorious thing when you get where you can tell God you are willing the world shall know you exactly as you are, and that you have fought down the last remnant of a disposition to have the world think better of you than you really are.

In regard to sickness and medicine: Without carrying things to too great an extreme, I would recommend dispensing, in a great measure, with the services of a physician. Get up in the morning and go to work, even if you do not feel well, and do not get into a habit of "laying off a half-day," even if you do feel badly. Ask men and women who have been really obliged to push through work, sick or well, if they have not felt, hundreds of times, as if they were about "too sick to move," but that after they got right into the midst of their daily tasks, they forgot all about it, comparatively, and came out all right without doctor or medicine. Old watches are frequently poorer timepieces after having been at the watchmaker's than they were before he touched them; and I have no doubt but that thousands, ay, millions of human beings are in poorer health,—yes, in more *hopelessly* poor health,—after having paid a large doctor's-bill, than they were before they ever went to the doctor. Go to your Bible instead of the doctor, and see where you have been trespassing on God's laws. If you go about your work with a bright faith in God, and a love for him and humanity that will shine out on every feature of your face, it will ward off fevers and malaria better than any drug that was ever invented.

Few people work over ten hours a day. Well, there are of sunlight in the summer, three or four hours more. If your work is indoors, I would spend as much of these extra hours as possible in the open air, with your wife and children, making garden, raising bees and chickens, or some such pastime. Do not let these pursuits run away with the money, but make them help support the family. Stop outgoes; have money coming in, but stop letting it go out unless it has been decided, by family council, that the expense is a necessary one. A great many employees are in the habit of purchasing things right along, that their employer would not think of doing, because they are too expensive. Pray over this matter, and ask God to make you wise. If you have tried to make garden, etc., and did not succeed, try again; and while you try, pray for God's blessing on the work. Make your Savior your business partner, your elder brother, as it were; and when you succeed, be sure you do not forget to give him thanks. Visit your neighbors who are successful in gardening, and make up your mind you will succeed as well as the best of them. When you learn to be master of these little things, when you get the knack of making things grow and thrive, whether or no, so to speak, you will find you are growing and thriving too, and that your faith in God is growing and thriving. There is a kind of feeling, as it were, in feeling yourself master of these things, as if God had taken you into his confidence, and was showing you, step by step, of his wondrous power through animal and vegetable life.

God in his wisdom has not placed you alone, friend X. It is far better for you that you have a wife and family; and, although it is hard to see these loved ones destitute of what you feel they ought to have, it is an incentive to you to action that you could not have otherwise. Often in life we feel that we would not mind it if no one else depended on us; but it is a mercy they do depend on us. You do not need to understand these riddles. They are none of our business. To think of death is cowardly.

There is an old Scottish song that speaks of lying down to die because a loved one had been taken away. You and I, my friend, do not want any of that advice at all. We are to get up and live; live for those who are left, and not only to make them rejoice, but to rejoice with them. It is Satan himself who tells you every man's hand is against you. You have no business tolerating such thoughts a minute; it is one of the blackest of lies, coming from him who is the father of lies. I can prove it to you at once. Are you against every man? and yet you are probably, like myself, about a fair average of humanity. You are doubting God and doubting your fellowmen. Stop it; get out and make garden, and keep both your hands and brains so busy you will never have time again to think of such things.

Does Satan ever tell you that a man may work his life out for his employer and never be appreciated either? That is another falsehood too. Do you not appreciate those who work faithfully for *you?* God may try you by letting you work a long while before he rewards your diligence; but the reward will come sooner or later. Do you not remember how many years Joseph stayed meekly and patiently in prison? Do you suppose he had no task to keep out hard and rebellious thoughts? and yet we find God was all this time preparing him and schooling him for his great life of usefulness. God has a life of usefulness for you too, and a life of joy and peace, if you will look up and accept it in God's own way. Only trust him.

Do you say that if all hands are as faithful and efficient as the one I have pictured, there would not be room for them all? That is a mistake equal to the one the English operatives made when they arose in mobs and destroyed the power-looms. If all were like him your employer could do business on smaller margins, and could sell goods at lower prices, so that thousands could use them now, who find them beyond their reach, and a still greater demand for hands would spring up. The same remarks I have made will equally well apply to tillers of the soil, and men and women in all the avocations of life. People who work for themselves, and who have no employer, frequently waste time fearfully. I presume, without doubt this bright April Monday morning thousands are standing with their hands in their pockets, wasting their time. Some will say, doubtless, they have nothing to do; nobody has set them to work. My friend, it is your *own* business to set *yourself* to work. If there is nothing else to do, there is always a chance open to us to cultivate the soil. If you haven't ground of your own, you can get enough to keep you busy, almost for the asking.

Now, a word about being satisfied with moderate wages, and a little of the good things of this world. When we are doing the best we can, we should be thankful. Having very small wages is certainly better than having no wages at all. Of course, I do not mean you should be satisfied with the product of a lazy and slothful way of going about your work, for in that case you ought not to be satisfied with yourself. To avoid the danger of repining against God and our fellow-men, we should strive to be satisfied with what God and our fellow-men see fit to give us, and to constantly fall back on ourselves for the things that are lacking. How can one have a happy, thankful spirit, if he constantly dwells on wrongs he thinks he has suffered. Let us school ourselves to expect moderately of the world, and then, if we get more than we expected, we shall of course feel thankful. One who is working for a dollar a day, and has laid out his life so as to live within that income for the next year, is very agreeably surprised to find that he is to have $1.25. I know it is hard for very many of us to humble ourselves enough to come clear down to the point where our expenses are less than our income, especially where that income is very small; but, my friends, it is the only way to secure real happiness. There is really a rare kind of happiness, to one who is strongly tempted to extravagance, when he can so school himself as to get down below that line of safety; to get where he can be willing to have folks think he is poorer than he really is; to be willing to be called poor and stingy, for Christ's sake; to be willing to have folks laugh and make unkind remarks about his clothing, that he may have the satisfaction of being able to meet all his promises promptly and squarely. You have not only paid your debts, but you have baffled Satan, and you have come out victor, thank God! Your clothes may be poor, your hands rough, and your cheek browned; but your name is spotless, and you are not only not afraid to meet anybody, but you are ready for lots more work of the same kind. Suppose some of those dandily dressed fellows do sit on the hitching-posts snickering to themselves as you go along when you go to town. What does it matter? Almost involuntarily you quicken your steps as you think fondly of the little home and the garden, with the chickens and bees, and, more than all, the happy prattle of the loved ones as they welcome you home. They know you, if the world does not. Your wife knows your true worth, and God knows, as you kneel at night with her hand in yours, it is with no formal words, but it wells directly up from the heart,—

"O God, we thank thee. We thank thee for this little home, so bright and joyous, and for these loved ones thou hast given us to care for, and bring up. We thank thee that thou didst, in thine infinite mercy and kindness, put into the hearts of thy servants to point us to the Lamb of God, that taketh away the sin of the world."

Friend Root:—I like to read your ideas on men and things that you come in contact with, although it causes a smile, sometimes, when you write that God answers prayer. I do not care how much you mix your business up with your religion; it is none of my business, any more than if you should mix salt with your tea for breakfast. What concerns me is, are you an honest man, and trying to do to others as you would like to be done by? Now, I wish to give my testimony that you are an honest man, and you are doing a great amount of good for the people, who read GLEANINGS, notwithstanding your ideas of salvation and eternal life. Much in the Bible is to be commended, much to be despised. I once thought God wrote the Bible; I know better now. Read the 109th Psalm, and ask yourself if God had any thing to do with it. Again, read 38th chapter of Genesis. A. I. Root, Esq., would not write such infamous sentiments in GLEANINGS; for when I wrote you a sarcastic letter, your answer was in kindness, and taught me a lesson not to be forgotten. You are doing good, and I want to help all men who are trying to help others, but I don't think that God has any thing to do with it, for I don't know as there is any such being, and I know as much as any other man living does, as the finite mind can't comprehend the infinite; hence, no one knows. One point you and I can agree on, and that is temperance; and I hate Christianity, because it will not attack this curse of the world. It bows down to the lousy god Mammon, and the wealthy liquor-dealer is called a good brother in any Christian church, if he pays a large sum of money for the support of the church Now, don't misunderstand me; I do not hate the men an women who believe in Christianity; what I mean is, I hate the creed they profess to believe, as (to my mind) it causes drunkenness and crime throughout the land, as there are more Christian thieves and drunkards in our prisons than there are infidels. My idea is, that if I do you a wrong I must pay the penalty; no Jesus to save me; and when this idea prevails, no more prisons will be required, no more drunkards in the land, no more preachers, but teachers like yourself who are doing good by *deeds* as well as words.

Now, I have written you some words, but they would be of little use unless there were deeds with them; hence find my subscription for one year, and it is well worth the money. W. E. LEONARD.

Port Huron, St. Clair Co., Mich.

I thank you for your good opinion and kind words, friend L. A few years ago a man came to visit me who was an old bee-keeper, and, after looking at the apiary and asking a few questions, he declared, point blank, that there was no such thing as a queen in a hive, and that neither I nor any one else had ever seen one. Do you think my faith was weakened, and that I rushed to a hive and opened it to see again if I had always been mistaken? or do you think I argued the point with him? Well, what you say about answers to prayer strikes me much in the same way. I had been working with the queens all day, and, although the man may have been honest, my acquaintance with queens was such that his remark—why, you know it is utter folly for me to say I *knew* there were queens in the hives. Now, please do not think me harsh when I say the evidence, *to me*, of a personal God, and one who answers prayer, is just about the same. Not that I see God with my eyes as I see a queen, but that I *feel his presence* very much as I feel this April morning sun when I close my eyes. I wonder if a little experience of the past few days may not make it plain to you.

In my work of trying to save souls, I often meet with sad discouragements. Just recently, in a case where forbearance ceased to be a virtue, as it seemed to me, I reproved and rebuked most severely. In fact, I overstepped the line, and, I fear, took upon myself the responsibility of judging, where God had not constituted me a judge. I thought it was needed, and that I had done my duty; but as the hours wore on, there began to be a dull pain, as a sort of under-current in my spiritual life; and as my mind ran back, it seemed to stop at the incident I have mentioned. The individual was gone, and I could see nothing to be done. If he suffered and wanted help, it was his place to come and accept of it, for my last words had been proffered help. During the afternoon, the feeling increased so that I went to my room and asked God to forgive me. This brought some peace; but for all that, the burden kept increasing. It was Saturday night. My evenings, especially Saturday evenings, are usually my happiest moments. To-night, nothing gave peace or rest. I went down into the greenhouse and looked at the bees in the pail bee-hive. They were doing finely, but this burden chilled and deadened every thing. I went up into the office and read the *American Agriculturist.* For a time, I forgot, and was as cheerful and pleasant as usual; but presently a great load that began to seem almost mountain-like, swept over me, coming from I hardly knew where, enveloping and chilling me to my heart's core. I told Mr. Gray of the incident, and he said I had done exactly right, if I recollect correctly; but against this rose up the voice of God in his displeasure, with a condemnation that settled the matter decisively. It was late, and surely nothing could be done at this hour. Oh that I had been more mild and gentle! I was just thinking I would give fifty dollars to have been able to recall those few words. Then I remembered the words in that little book, the Christian's Secret of a Happy Life, that God forgives instantly, and peace always comes at once when we are truly penitent, and ready to obey *implicitly*. I have had such trials before, and I knew by experience, the pain would, *in time*, wear off. I sat down gloomily, thinking it was God's just punishment, and there was no other way but to live it through. A sleepless night and unfitness for my Sabbath-day's labors rose before me, but there was no help for it. I must bear it, and try again to learn better. It was, I confess, with a lack of faith that I again knelt alone and asked God's forgiveness. Now should I say that, while on my knees, God told me what to do, you would call it visionary, and therefore I will state it this way: While on my knees the thought came to plunge out into the night and hunt up the one who was, very likely, even now giving himself wholly into the hands of Satan. The feeling came stronger, and seemed to say, "He whom you have helped and cheered and encouraged with kindness and long patience thus far, now in his hour of greatest need and sorest trial you have deserted; an immortal soul is likely at this very instant feebly wavering on the verge of ruin, and no hand near to stay his fall." Some thing did suggest faintly that I knew not where he was; but strong and clear came the voice, "I will guide thee." Off I sped, and before I knew it, the load had gone, and I was happy—happy as a bird in the air. It was among those who were almost strangers that God led me, and it was with a little trepidation that I intruded; but very soon I knew why God had sent me there. It was not much that I said, and I fear little was the good I did, more than to say a few kind, hopeful words, and then I was directed to visit two or three others, whom I knew would sleep better after having heard the result of my mission. One of them was the dear friend who was to preach to us on the morrow, and it was worth a great deal to see his face light up, and the load of care lifted a little, and the thought occurred to me that he would not only rest better, but that his sermon on the morrow would reach further in its mission of saving souls. Home at last, and happy. My wife does not worry when I am late now, for she feels sure that somebody will be made happier for my absence. And is this indeed myself, and *my* life? The old life is not forgotten yet, even though a half-dozen years have passed; and as I lie down to rest, almost too happy to sleep, I praise him again and again for his mercy and kindness.

> Behold the Lamb of God, which taketh away the sin of the world.

Yes, not only the *sin* of the world, but the pain and sorrow of the world, to all who will put their trust in him. Now, I do not wish to say by the above that anybody was saved or converted by my visits that night, for the events are in God's hands, and the responsibility rested on him, and not my poor self, after I had obeyed the promptings of that moving spirit; but the point I wish you to see is, that God answers prayer in the way I have indicated, and gives relief. I know you may explain it away by saying that it was only a feeling of uneasiness, and that I felt better as a matter of course, after having done a humane act; but, my friend, who and what prompts these feelings, and what will be the result of following them? Suppose we call it God, or the "God part" that is in us all; and, to go a little further, what will be the result of cultivating this prompting spirit within us? Is it wild to think this gentle influence might in time grow so as to envelop you like a robe, and, while it guards and holds you from evil, that it may also give you a feeling of happiness and safety that can be, without exaggeration, compared to the text,—

> Eye hath not seen, nor ear heard, neither have entered into the heart of man the things that God hath prepared for those that love him?—I. COR. 2:9.

Now a little further: If one is going to cultivate this influence, he must have quiet and meditation; especially is this the case with a beginner. He must commune with himself—with his inner nature. It is no easy matter for untrained humanity to submit to be led by an influence so gentle as to be compared to a summer breeze.

> A bruised reed shall he not break, and the smoking flax shall he not quench.—ISA. 42:3.

Well, now, friend L., how better can we place ourselves than in the attitude of prayer, when we wish to seek this straight and narrow path? The bowed head indicates humility and obedience; the closed eyes, a willingness to forget earthly objects; and an audible voice, even though you are alone in the woods, that you are not afraid to ask the God who made you to guide you in ways of wisdom and in paths of peace. I have only tried to tell you how *I* feel about answers to prayer, friend L., so far, and at another time I will try to answer some of your other difficulties.

ENVELOPES directed to myself will be furnished free to any of our patrons who may want them. Postal cards, directed in same way, for one cent each, postage paid on all. Just say how many you want, and they will be forwarded at once.

SMOKER COLUMN.

I HAVE spent the evening in reading and reviewing April GLEANINGS, and have found many interesting articles, and lastly ran upon "Smoker" column, the most singular offer I ever heard of. As to this, I will give expression to my views. Your offer to give a smoker to all those who will abandon the use of tobacco, on simple statement, you taking a person's word only, no oath required! By the way, I am inclined to think that a great many will make use of your extreme liberality, and you will suffer quite a loss that will amount to quite an item at the end of the year by giving away your smokers. It is likely that perhaps about one-half of these individuals are sucking away at their pipes as usual, in spite of their promises. AUG. TIGGES.

Marathon City, Wis., Apr. 12, 1881.

Friend T., you are to me one of this vast sea of humanity. I do not know you any more than I know those who have publicly made this promise, except from what I can judge from the letters they have written. Now, would *you* keep the promise, if you had given it under the same circumstances? To be sure, you would; and so will the others. They are not under my eye, and the promise is not, in one sense, given to me. It is made before God, and it is God whom they offend, if they break it, without coming out honestly and acknowledging their fault, and paying for the smokers like men. Is there one among us who would break such a promise for the paltry sum of one or two dollars? God forbid! There is a great strong arm back of me, in this, friend T., and He will take care that I do not suffer very much.

Thanks for smoker, all O. K. When promise is broken, I will pay you for ten smokers.

Beverly, Mo., April, 1881. ED. LADD, JR.

I will ask you to send me a smoker, for I shall never use tobacco again, under a penalty of five dollars the first time I smoke, chew, or use it in any way as a stimulant. Send me a large Bingham smoker on the above conditions.

N. B. H. DEAN.

Brighton, Ont., Can., March 10, 1881.

Do not send me a smoker for leaving off using beer and tobacco, but please help me to form other resolutions, which I consider worth more than presents.

Chillicothe, Ia., Mar. 15, 1881. JOSEPH BALL.

I want to join your tobacco army; and if you will send me a smoker I will pledge my word *never* to use tobacco again. Please send me one of those largest-sized ones—one that holds *two* quarts. If you do not intend to give that size, I will pay the difference, and if I use tobacco again, I will pay you $4.00 for it.

Los Angeles, Cal., Feb. 21, '81. W. W. BLISS.

About the smoker you sent me: it seems easy now to keep from smoking. I have promised wife, God, and you, to keep from it, so if I break one I break all. Thanks many times for it, and hoping God will bless you and your "Home Papers," I remain,

E. LADD, JR.

Beverly, Macon Co., Mo., April 5, 1881.

REPORT FROM NEIGHBOR SHOOK.

WINTERING 45 COLONIES WITHOUT LOSS.

THIS is my first attempt at letter-writing. I will tell you my experience in bee-keeping. I have kept bees since 1864. I kept black bees about ten years in box hives, averaging from one to eight, with no honey to eat, until 1875; then I got up to eight again. I then bought eight Italian queens of Mr. Dean, about Sept. 1st, 1875. I Italianized all, and changed to movable-frame hives.

In 1876 I increased to 15 colonies by artificial swarming, and procured 400 lbs. of honey. Since then I have had all the honey to use I wanted, with bees and honey to sell. In 1879 I increased to 41 colonies, of which I lost 2; in the spring of 1880 I sold 19 colonies; started again with 20 colonies; increased to 45; procured about 500 lbs. of honey; lost none. These colonies are very light, but I think they will come out all right. I winter in house. The outside is sided up with ⅞ drop siding, sealed inside with inch lumber; have *seventeen* inches of sawdust between walls. It is warm; the lowest that I saw the mercury this winter was 3° below freezing. This is rather warm — perhaps chaff would be better. I have it ventilated at top and bottom; have wintered in house three winters, with good success.

DANIEL SHOOK.

Seville, Medina Co., O., April 21, 1881.

A FRESH A B C SCHOLAR'S STORY.

AS I am one of the A B C class, a new and green scholar at that, I will make my report. I am an invalid, and have been for several years. I had to quit business on account of my health. I bought 13 colonies last October and November at public sale. They were in miserable old rotten hives; about 4 had stores sufficient to winter on; remainder had plenty of bees, but had but little stores. I bought pine lumber and had hives made, 20 inches in the clear; set the old hives in these, and packed straw between them, and put gunny sacks and baling stuff on the frames, and left them to care for themselves until spring. We had an unusually cold and long winter. They had one day in February and two in March they could fly; but a great many died on the snow. I began to feed coffee A sugar syrup the 20th of March, by putting the syrup in plates and saucers placed on the frames and under the gunny bags. I gave each colony two saucers of syrup a week. They ate it readily. But 3 of my weakest colonies died, one in February and two in March, leaving me 10—one with dysentery bad, but cleaning up and working now. Gathered first pollen from hazel April 13, mercury 43, and have been busy every day but one since that. We had a hard rain this morning; cloudy all day; bees boiling out at the entrance, and packing pollen as if their very existence depended on to-day's work. They are hybrids and the common black. April 16th one hybrid colony sent out a fair swarm. They settled and acted exactly as a swarm would in summer. I went to the mother colony and found a hybrid queen near the entrance in a small clump of bees. I picked her up, put her in a cage, and opened the hive to see what the trouble was; found plenty of bees, some sealed honey, eggs, and unsealed larvæ. Well, you have left plenty to keep house, and now what's the matter? I examined the cluster and found another hybrid queen. I then put them in a hive that was full of combs; gave them one sash of eggs and unsealed brood from the mother colony; and one sash with some honey and a saucer of syrup on top of frames; put in some old rags and tucked them up warm and nice; found my saucer empty next morning. They are now gathering pollen, and working finely. A swarm of bees day before Easter in North-western Missouri! How is that? Have I overdone the business, or what is the matter? To-day, April 20, is the first day the bees have worked on the elm bloom. All vegetation is very late. Fruit-buds just beginning to swell. Well, I must quit—too long now, etc. "There, John, hand round the waste-basket." **ALEXANDER FLOYD.**

Guilford, Mo., April 20, 1881.

No waste-basket at all, friend F. I am always glad to hear from the new scholars, and a letter like yours, full of hope and fresh enthusiasm, is a jewel after our long season of blasted hopes. You have done just right, and your new swarm is the reward of faithfulness and diligence, and nothing else. Go on and prosper, and let us hear from you often.

WHAT KILLED THE BEES?

HAS THE SHALLOW L. FRAME BEEN WORSE FOR WINTERING?

I COMMENCED five years ago in the A B C class with one swarm, and have now some few over one hundred, all from that swarm, and I have never lost any of any account until this winter. The advocates of a deep frame who have wintered their bees, claim it was the frame that did it; but I think that the facts will show that bees in hives with deep frames crosswise of the entrance have died just as badly, if not worse, than those in the usual hives. Out of 37 hives of bees bought by a Medina man this spring of the Nunn brothers of Norwalk, 17 were in the Am. hive, and 20 in Langstroth. They all died in the Am. hives but two, and there were 10 in the L. hives that lived.

POLLEN AND ITS INFLUENCE ON DYSENTERY.

I have a small apiary in Litchfield, located on a branch of Black River, where the bees gathered so much pollen that they filled frames from top to bottom and from end to end. The bees were all in chaff hives on 24 frames. In Sept. I packed the bees on the ten lower frames, taking all the frames that had pollen in to build up the Holy-Land apiary. Wherever I put a frame of that pollen, the bees wintered badly, were sick, and a good many of them died. The bees that I left without the pollen, though I did not see them again till the 18th of April, were every one alive and in splendid condition. I hear from one of his neighbors that R. Crow's large apiary in his square-frame hives, only one mile away, are all dead. It was not the hives, but the pollen that killed them. In our Cyprian apiary, in the old chaff hives that the bees had well waxed up and were packed early, though part of their stores were grape sugar, all are alive and strong, while those that I packed late in new hives, though I united two or three small colonies, to make one large one, almost all are dead, and what are alive are very weak. I never had good luck uniting bees in the fall; I would rather feed the weak colonies, and build them up strong. I don't think it is luck wintering bees, but knowing all the conditions under which bees should be put into winter-quarters. In the first place, you must have young bees; for if the bees are all old in the fall, they will all die of old age before spring. I think that is the thing that killed A. I. Root's bees; he would fill every order for bees, and in putting them up, by shaking the combs the old bees will fly, and the young bees only fall into the cage; and besides, the old bees are those that do the out-door work, and the young stay at home and do the housework and are, therefore, the ones that get sold. I know this is the case, for I helped put up his bees, and besides, I know how it worked in my apiary.

Another thing that helped to kill them: There was a large fruit-evaporator about sixty rods from his apiary, and the bees worked on the decayed fruit. I know some of our hives had the scent of bad peaches, and I tell you that is not good winter stores for bees. I will try to give some more hints between now and next fall. **H. B. HARRINGTON.**

Medina, O., April 26, 1881.

A VISIT TO NEIGHBOR H.'S APIARY.

YOU see, he came along with that fast horse of his, just about supper time, and asked me to step in. He didn't have the old rickety buggy, but he has got a new light one, just right to go around to his apiaries with. I observed a hole in the bottom, even if the buggy was new, and mentally resolved not to step through that hole. Supper time is a very important hour with me, and so I just stepped up to the door of the lunch-room and asked "Lu" to give me a paper bag of sandwiches. You know I am always careful and prudent. Patsy bounced us over rough roads, and fairly made us skim the ground, when we came to a level piece, and finally landed us at the apiary.

"Neighbor H.," said I, "do you know when it was I first saw this garden?"

"No," said he, "I don't."

"Well, it was about 20 years ago. I admired the garden very much then (more than I do now, in fact), and I admired a strawberry bed that stood over in that corner; but if I recollect aright, I admired the farmer's daughter who lived here a great deal more than either, as she helped me pick strawberries that June evening."

H. said he didn't remember the strawberries, that he knew of, but he did remember admiring that farmer's daughter's *younger sister* a few years later, and, come to think of it, I do not believe we either of us ever got really over it, and that is how we came to be brothers-in-law.

I lifted the cover to a chaff hive, and took out the cushion. Under a sheet of duck was a tin-pan cake of maple sugar, tunneled and honey-combed all through, and a rousing colony of bees it was. I opened another and another, and every hive had the same cake of sugar, or the remnants of one, and about the same amount of bees. We took a queen and 1 lb. of bees (worth now $6.00) from one moderately strong colony, but did not seem to hurt them materially in numbers. I presume the apiary would furnish $500.00 worth of bees and queens to-day, and then build up, without trouble. Said I,—

"Look here, H. You would kill a weak

colony by giving it a whole cake of sugar like that, in cool weather."

"Well, don't I know that? I *have* killed four or five in learning it by experience."

In putting the frames back into one of the hives, it struck some thing on the bottom of the hive. It was fine dry sugar that had rattled down, after they had sucked out all the moisture. H. replied that he knew that was one nuisance in feeding sugar cakes or candy. I told him I would fix it if he would show me a dipper of water. With this we dampened the sugar on the bottom-boards, and the bees soon did the rest. The large cakes, that had been eaten out to a dry shell, were dampened and used up in the same way. H. will, without trouble, make his hundred hives bring him a thousand dollars in selling queens, and bees by the pound. As the sun was going down, we got into the buggy to go home, and I began looking around anxiously for my bag of sandwiches. Sad, sad to tell, they must have slipped out of the hole in the bottom of the buggy; and the more I thought of it, the more I meditated on the excellencies of sandwiches.

"There they are," said H., and Patsy was on the spot in a twinkling, and we both declared it had not hurt them one bit by lying in the middle of the road on the top of the hill an hour or two. Do you know how they are made? Get some nice biscuit and butter, boiled ham, and a pot of mustard. Put the mustard on the slices of ham, then the buttered biscuit each side of the slice; put 'em in a paper bag, and when you are out riding, after supper time, just — taste yourself, and see.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, MAY 1, 1881.

By their fruits ye shall know them.—MATT. 7:20.

DON'T quarrel.

SAVE your money.

RAISE your own queens, and then you will be sure nobody has cheated you.

PLEASE "go slow" in finding fault with each other. It is the easiest thing in the world to be mistaken.

WE shall now have all kinds of queens on hand, ready to ship by return mail, at our table prices just as we have for years past.

APRIL 29th.—We have 4265 subscribers, and the *catnip* and *motherwort* plants are up in the open ground, as well as the others.

AND would you believe it? The Spider plant has self-sown its seed also, and under the influence of this fine weather the young plants are coming up as thick as "spatter."

Do not be in too much haste to divide. You can raise more bees by making each colony a strong one before dividing it, than by crippling the queens by giving them only a small cluster of bees.

THE amount of matter on hand is far beyond what we can find room for, and the letters in regard to losses are so many that we shall hardly find room for one in ten. It is time now, friends, to take some other topic, until another winter.

I DO not want to buy empty combs, nor do I know who does. All our combs are now built on wired frames, for convenience in shipping bees. Those who have them may advertise them, if they wish, at 20c each insertion, as in the bees, queen, and hive columns.

LET it be distinctly understood, that those who send out queens are to be in no way responsible unless a full and complete *single* address is given. An order is now puzzling the clerks, where the letter is headed one P. O., and another given after the signature.

Do not let your empty combs go to waste. If they are nice ones, do not try them up for wax either. Look at them often, fumigate them if the worms get started on them, and save them for another year, if you do not need them all this. I have often saved them over, without a particle of injury.

THE price of our one-piece sections will be, for the present, $4 50 per thousand; but at this price there can be no wholesale, and I can make no rebate to those who have already purchased. Demand and supply fixes the prices of many such goods, and I can neither well forsee nor be responsible for fluctuations in prices.

NEIGHBOR DEAN has wintered 66 colonies, and lost only 8. Do you not see that the veterans are surely gaining ground? With the exception of myself, I really believe our Medina Co. bee-men have wintered better than they do on an average. Friend D. wintered part in his cellar, and part in his sawdust-packed house, but says he found little difference.

WHEN you get some thing from the Counter Store that is not as it is described there, please bear in mind that it is probably because we could not get the article we are accustomed to have, and so did the best we could by sending the nearest thing to it. I am sure I am more sorry than you can be, when I am obliged to do this.

ROBINSON CRUSOE has finally come out in cheap book form too. It is published complete, with quite a lot of pictures, in a book of 240 large pages, for only 25c. The frontispiece is a picture of Friday's astonishment at the power of the gun. No boy's or girl's education can be said to be complete until they have read Robinson Crusoe. We can mail it postpaid for 25c.

NEIGHBOR SHANE, with an apiary of about 190 colonies, has not lost to exceed 10 per cent, and wintered outdoors at that. The hives were ordinary L. hives, with chaff cushion over the frames. He borrowed one chaff hive from us, which wintered without a loss of over two dozen bees, and consumed much less stores than those in his other hives. Although he always wintered in cellars until of late, he now thinks he shall winter out of doors next winter. I confess I am a great deal puzzled.

Right before us is a letter with money in for a queen, and the writer says he is going to "hold" a colony queenless until he gets her, and yet he hasn't signed his name. I opine both he and the colony will get tired before he gets her.

Do not depend too much on buying queens from other parties. Both Will and neighbor H. say they would almost as soon raise a queen in a nucleus as to take the chances of introducing one. A queen-cell ready to hatch will often get a laying queen in a hive as quick (or quicker) as to buy one and try to introduce her.

The dictionaries came at last, a whole thousand, and regular little beauties they are. I have had a big scolding all round for selling them so cheap. Mr. Gray commenced it, my wife then took it up, and finally my 18-year old boy took me to task, and talked to me like a father. Send 15c for the dictionary (and 5 more for postage, etc.), and then you can scold too if you like.

THE RUBBER PLATES FOR MAKING FOUNDATION.

We have at length, after much and expensive experimenting, got rubber plates for a full-sized sheet for L. frame. The imprint is for Dunham fdn., furnished by Dadant, and is perhaps the best, all things considered, that can be used. It makes about 5 feet to the pound. There are some things about the machine that we wish to improve before filling orders for machines. I know it is bad to keep you waiting this time of the year, but I really see no help for it. We hope to be sending out machines in a week.

PRICES OF BEES AND QUEENS FOR MAY.

Queens will be as per table in price list, but owing to enormous demand for bees by the pound, and the scant supply, the prices for May will this year be the same as April, or $2.00 per lb. Of course, those who have sent money before this reaches them will be served at the usual May prices, $1.50 per lb. If others can do better, I shall be very glad of it, for I know that it will be better and cheaper for you all to deal directly with each other, instead of passing so much through my hands. I have already purchased 90 fine colonies, but I rather prefer not to cripple them all at once by selling off all the young bees by the pound.

A few days ago we lost our half-gallon measure for kerosene oil, and the tinsmith made another. As I had often talked to him about having measures absolutely exact, he made it so, but when the old one turned up, it was found the new one held half a pint the most. This measure was one bought at our tin-shops, and was perhaps about as nearly right as the average. I have for years cheated every customer who has purchased oil of me, to the above extent. Do you not see the need of some thing better than the usual slipshod way of doing business? Our glass graduates on the 25c counter are intended to correct all the measures about the house, and I can but regard them as a boon to humanity.

MAPLE SUGAR.

I have bought, of the Medina County farmers, somewhere from three to four tons of maple sugar this spring, and our girls are busy making it into 1-lb. bricks. Fifty bricks will be packed in a box, each wrapped in a nice clean paper. The price will be 10c. per brick, or $4.75 for a case of 50 bricks. The sugar, as we buy it of the farmers, in tin-pan cakes, will be $9.00 per hundred lbs. It is pure maple sugar. In making into bricks we only boil it so it will not drip or drain in shipping, stirring it well to give it a fine grain. I do not know of any thing better for bee candy, and it is also a fine thing to have when you want to coax the children to be "good." Wouldn't you be good if you were in their places?

SIMPSON PLANTS.

We did not get all our Simpson-plant seed gathered last fall, but after shaking out some, and trying it, we found it to grow splendidly. Now, what do you think I found last evening? Why, while I was admiring the great green shoot from the old roots, as they raised the soil, trying to push their broad heads into the sunlight, it occurred to me I should have to cultivate them at once, as there was such a great quantity of weeds starting. In fact, these weeds fairly made a carpet of green that covered the ground. I stooped down. Simpson plants, as sure as you are alive, in countless millions. Why, I can furnish you all you will want at 10c. a hundred if I can only get them mailed to you safely. Will some of our nursery friends kindly instruct me in the best way of packing, and tell me where I can get the proper material, etc.? Postage will probably be another 10c.

Neighbor Shaw, who uses the dead air-space instead of chaff packeng, reports as follows:—

I have lost two swarms by starving, out of 47; all the rest came through in good shape except the loss of two queens; all wintered on summer stands without any protection whatever except the hives. F. R. Shaw.

Chatham Center, O., April 20, 1881.

A FRIEND IN NEED IS A FRIEND INDEED.

Just as we go to press comes the following:—

Your postal of 20th April is at hand. We can furnish bees in May at $1.00 per lb. including shipping-case and insure safe delivery by express (you paying express charges.) I can also furnish whole swarms during same month at $2.50 in 4-frame nuclei to the amt. of 50 lbs. of bees and 20 swarms, if ordered immediately. If we can furnish more will let you know. We think, by getting early swarms you could get them in time for your honey crop. Our blacks are almost ready to swarm. Italians behind, and weak. W. R. Whitman & Co.

New Market, Ala., April 25, 1881.

Here is another:—

I have received your postal of the 20th. I will furnish bees by the lb. to your customers from now until the last of May for $2.00 per lb., and guarantee safe delivery by express only, buyer paying transportation charges. I will guarantee safe delivery by express only, and only when the purchaser gives his full plain address; and if his P. O. and express office address are not the same, he must give both. You ought to stipulate this conspciously in every issue of Gleanings, because we can not pay for other people's carelessness. J. G. Taylor.

Box 134, Austin, Travis Co., Tex., April 24, 1881.

I agree, friend T. Will customers please take notice?

SUGAR-CANE THAT BEARS THE SUGAR IN THE BLOSSOMS.

It's coming, boys, as sure as can be. Just listen:—

I will send you some seed of orange cane. If you are going to plant any cane, it's far ahead of Amber, as it is so much larger, and nearly as early; makes twice as much syrup or sugar. I have sugar I made from Louisiana ribbon cane, and that from "orange" is nicest. I notice the bees work on the bloom also. My Simpson plants are now nearly 2 ft. high.

I. G. Fitzgerald.

Brookston Tex., April 20, 1881.

To be sure, I want some seed, friend F., and I presume several others will too. Sugar-cane that the bees will work on is just what we have been looking for.

FAIR PLAY.

The following was carelessly omitted in the proper place:—

LET US HAVE FAIR PLAY.

Several friends of ours having informed us that Mr. Jones, at the national convention held at Cincinnati, had said that we were selling spurious Cyprian queens, we wrote to him, and in reply, he said that we had sold, as Cyprian, queens that had not a drop of Cyprian blood in them. Mr. Benton, besides, wrote to the "Bee-keepers' Magazine" that but few queens had been sent from Cyprus to European breeders, and that part of them had died on the way. We have notified Mr. Fiorini of these allegations, and received, in reply, among several other proofs, a certificate from the railroad agent, stating that Mr. Fiorini had received, in 1880, seven shipments of living bees from Larnaca, Cyprus. Chas. Dadant & Son.

Hamilton, Hancock Co., Ill., March 19, 1881

THE TURN O' THE TUNE.

BY A BEE-KEEPER'S DAUGHTER.

Once I wandered in the garden,
  In the happy days of June,
When the roses were in blossom,
  And the birds were all in tune;
And I sang in purest pleasure,
  "What a happy world is this;
June has sweetness without measure,
  And to live is almost bliss!"

So I stooped and pulled the roses,
  Till a sudden blinding pain
Shot like lightning thro' my body,
  Numbing hands and dulling brain.
There, within those dewy roses,
  Fresh with fragrance, wet with dew,
Lay a honey-bee reposing,
  Filled with sweets and—venom too!

While the honey-bee reposes
  Undisturbed, untouched by me,
Even mid my choicest roses,
  I severely let him be;
For I've wiser grown, and sadder,
  And my life is not all bliss;
So I chant in minor cadence,
  "What a bitter world is this!"

ELIZA M. SHERMAN.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

NEW YORK, April 22.—*Honey.*—We quote you comb honey, put up in neat packages, as follows: Best white, in 2-lb. boxes, 15@17c; fair white, in 2-lb. boxes, 13@14c; buckwheat, in 2-lb. boxes, 10@12c; large boxes, 2c per pound less than above prices; best clover, extracted, 9@10c; buckwheat, extracted, 7@7¼c. Honey market is very quiet this spring, with no demand for comb honey.

Beeswax.—Market is quiet and very firm; but very little in the market, and is selling at 24@28c.

H. K. & F. B. THURBER & CO.

CLEVELAND, April 20, 1881.—*Honey.*—Market is not very lively; in the absence of stock, I have no positive reports, but choice white 1-lb. sections would bring 19@20c; dark, 16@18; 2-lb., 18@19, and dark 15@17. Extracted, 12@14. A. C. KENDEL.

CINCINNATI, April 20.—No change in the honey market. Demand still pretty fair for extracted, and almost no trade in comb honey. No change in prices. CHAS. F. MUTH.

CHICAGO, April 21.—*Honey.*—There has been no change in the market in this city since my last quotations, except a slight decline in white comb honey—some having been sold as low as 16c. The supply is still abundant.

Beeswax.—Remains the same.

ALFRED H. NEWMAN.

ST. LOUIS.—March 23.—Present market quotations ase as follows: *Honey.*—Ready sale. Comb 16@18; top rate for fancy bright; strained and extracted, 11@12c ꝑ ℔. *Beeswax.*—Firm. Prime yellow 21, dark at 20c. R. C. GREER & CO.

Conventions.

CONVENTION DIRECTORY.

TIME AND PLACE OF MEETING.

1881.

May 5.—Central Mich. Bee-keepers' Association, in Pioneer rooms of the State Capitol, at Lansing, Mich.
May 10.—Cortland Union Bee-keepers' Association Cortland, N. Y.
May 11.—South-western Wisconsin Bee-keepers' Association, at Darlington, LaFayette Co. Wisconsin.
May 10, 11.—The Eastern New York Bee-keepers' Association, in Court House, at Schoharie, N. Y.
May 12.—The South-eastern Michigan Bee-keepers' Association, in Court House, at Ann Arbor, Mich.
May 17.—The North-western Bee Union, at Hastings, Minn.
May 19.—Champion-Valley Bee-keepers' Association will be held at Bristol, Addison Co., Vt.

Recent Additions to the COUNTER STORE.

FIVE-CENT COUNTER.

Postage.]		[Pr. of 10,	of 100
2	Copper Wire, on spools, suitable for mending things when they get broken. Two sizes, No. 20 and 25..	45	3 50
4	Envelopes; fair quality, bunch of 25, three bunches for 10 cents............	30	2 50
4	Soap, containing pumice stone.......	38	3 50

Called "Pumicine." An excellent thing for removing propolis, varnish, or stains of any kind from the hands.

2	Spectacle cases; leather; excellent ..	40	3 75
4	Slate Pencils, best soapstone, 6 in a neat tin box....	40	3 50
2	Ferules for tool handles, dozen packages, brass, handsomely finished, 2 sizes, ¾ and 11-16......................	35	3 25
1	Pens, Steel, 1 Doz. Gillott's 404........	40	3 75
7	Sandpaper, best. assorted packets of 5 sheets, 3 different grades, No. ½, 1, 1½	40	3 50

TEN-CENT COUNTER.

	Honey Jars, ornamented with glass cover, a beautiful dish for only 10c..	95	9 00
5	Hats, straw, for summer, (good for those who have lost their bees—only 10 cents)	85	8 00
	Maple Sugar in 1 lb. bricks, good for bees and children......	98	9 50
1	Pens steel, 1 doz. Gillott's Celebra'd 303	85	8 00

FIFTEEN-CENT COUNTER.

28	Wooden Bowls, 14 in. in diameter...	1 25	12 00

GLASSWARE.

	Spoon Holder, London pattern, looks like a picket fence..................	1 35	12 00

Twenty-Five Cent Counter.

18	Bags for grain, 2 bushels, seamless	2 25	21 00
2	Knife, Ladies, Ivory handle. 2-blade, a beautiful knife for the money...	1 75	16 00
3	Butter Knife, silver-plated on steel, finely finished................. .. .	2 00	18 00
14	Steel Trap, a good one with a stout 2 foot chain attached...	2 00	18 00

GLASSWARE.

	Honey or Butter Dish, Albion pattern; new pattern, something like a butterfly and wonderfully pretty	1 75	15 00
	Graduated Measure, glass...........	2 30	22 50

A most valuable article in the household, as it measures absolutely correct. from ¼ gill to 1 quart, and is a very strong and handsome utensil.

ONE DOLLAR COUNTER.

	Caster, Brittannia, 5 bottles, a splendid caster for a dollar................	9 00	85 00

A. I. ROOT, Medina, Ohio.

1881 CHOICE ITALIAN AND ALSO CYPRIAN QUEENS FOR SALE. 1881

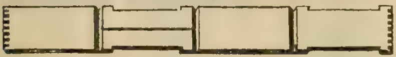
Parties ordering of me will get just what they bargain for. Circular free.

Address J. C. POMMERT, Box 124,
4-5 Greenfield, Highland Co., Ohio.

1881 QUEENS! QUEENS! 1881

We are prepared to furnish Queens in April, May, and June. For tested Queens, $2 50; afterward, $2.00; untested, $1.00. Queens reared in full colonies from imported mother. In addition to our imported Queens, we have some fine Queens in our apiary from some of the leading breeders of the U. S. We not only select our imported Queens to rear Queens from, but we select the best imported and the best home-bred Queens we have to rear drones from. We allow no colonies to have drones, except such as are from the choicest of our Queens. Satisfaction and safe arrival of all Queens guaranteed. No circular. HALL & JOHNSON,
3-6inqd Kirby's Creek, Jackson Co., Ala.

SECTIONS AND HIVES!



James Forncrook has just received a patent on his machine for scoring Honey-Box Sections, dated March 29, 1881; No. of patent, 239,476. He has not sold any shop rights on the machine, nor does he intend to; therefore any one using a machine to make the One-Piece Sections are infringing.

We will make the "Boss" Section, any size up to 5x6, for $5.00 per 1000; Material for L. hive, 50c.

JAMES FORNCROOK & CO.
Watertown, Jeff. Co., Wis., May 1, 1881. 5d

CYPRIAN, HOLY-LAND, HUNGARIAN, AND ITALIAN Queens & Bees!

I have made queen-breeding a specialty for 20 years, all our queens are reared in full colonies, and we send out no in-and-in or nuclei-bred queens. Our queens are reared on a new and scientific principle, combining beauty, purity, industry, and docility. All queens warranted pure, and safe arrival guaranteed by mail. Warranted queens, $1.00 each; choice selected, $1.25 each; tested, $2.00 each. Send for my 20th annual circular. Try the new races and their crosses. HENRY ALLEY,
5d Wenham, Essex Co., Mass.

HEADQUARTERS IN THE SOUTH

For the Manufacture and Sale of

BEE-KEEPERS' SUPPLIES!

SIMPLICITY AND LANGSTROTH HIVES AND FRAMES. THE NEW ALL-IN-ONE-PIECE SECTIONS!

Having purchased from A. I. Root a machine for making the sections, I am ready to supply them in any quantity.

Comb Foundation, made of pure yellow wax, and worked on shares, etc. Honey and Wax-Extractors; Knives, Bee-Smokers, etc., etc.

ITALIAN QUEENS AND BEES!

All bred from imported mothers of my own importation. Dollar queens, ready April 1st, $1.10 until June 1st; after, $1.00.

Tested queens, from March 1st to November 1st. Safe arrival guaranteed, and all queens sent by mail. I send no queens that I would not have for myself. Full Colonies of Italian Bees from $5.00 to $8.50, according to quantity, etc. Early 4-frame nucleus, with Tested Queens, $5.00—No black bees in the neighborhood. Send for my Illustrated Catalogue of prices, etc. Address

PAUL L. VIALLON,
5d Bayou Goula, Iberville Par., La.

Do Not

Save Your Fowls!

and get Price List of High-Class Poultry, Eggs for hatching, Italian Bees, etc., by addressing J. R. LANDES,
3-6d Albion, Ashland Co., Ohio.

FAIL

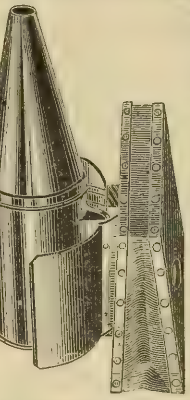
Colerain, Mass., April 11, 1881.

Messrs. Bingham & Hetherington,—

DEAR SIR:—I concluded to use the Large Smoker instead of sending it away. It is *the smoker*, I don't wan't any better; shall throw all others away.

Respectfully, E. A. THOMAS.

THE ORIGINAL DIRECT DRAFT!



Patented Jan. 9, 1878; May, 1879; Re-issued July 9, 1878.

If you buy a Bingham Smoker, or a Bingham & Hetherington Honey-Knife, you are sure of the best and cheapest. The largest bee-keepers use them exclusively. Twenty thousand in use; not one ever returned, or letter of complaint received. Our original patent Smokers and Honey-Knives were the only ones on exhibition at the last National Bee-Keepers' Convention. Bingham Smokers, all but the Small, have fire and cinder proof bellows. The large and extra Standard Smokers have extra wide shields to prevent burnt fingers. These are the only real improvements made in bee-smokers since the Direct-Draft invention. Bingham is the inventor and only *legal* maker of them.

Bingham & Hetherington Honey-Knife, 2 in., -	$1 00
Large Bingham Smoker, 2½ in., - - -	1 50
Extra Standard Bingham Smoker, 2 inches, -	1 25
Plain Standard Bingham Smoker, 2 " -	1 00
Little Wonder Bingham Smoker, 1¾, " - -	75

If to be sent by mail, or singly by express, add 25 cents each, to prepay postage or express charges. Send card for testimonials. To sell again, apply for dozen or half-dozen rates. Address

BINGHAM & HETHERINGTON,
5tfd Abronia, Allegan Co., Mich.

ESSEX PIGS A SPECIALTY!

75 to 100 Pedigree Pigs for delivery in June, six weeks to two months old. Write for prices.

Also Brown Leghorn (prize winners) EGGS, @ $1. per doz., and B. B. R. G. Bantam Eggs for Hatching (imported), @ $1.50 per doz., in new baskets. Safe arrival guaranteed. **C. W. CANFIELD,**
5t1d **Athens, Bradford Co., Pa.**

Save Money!

Single Queen, Tested, - - - - - -	$1 50
Untested, Laying, - - - - - - -	80
Warranted, - - - - - - - -	1 00
Three-Frame Nuclei, - - - - - -	2 50

All Queens from imported mothers. Safe arrival guaranteed. All that favor me with orders shall be well used. DAN WHITE,
5d New London, Huron Co., Ohio.

SEND FOR MY LARGE ILLUSTRATED CIRCULAR! It will tell you what I have for sale. If you keep Bees, don't fail to do it.

Address B. S. UNDERHILL,
4-6d Williamson, Wayne Co., N. Y.

WILL EXCHANGE

500 worker combs in L. frames for bees by the pound. Address, J. A. BUCHANAN,
5d Holliday's Cove, Hancock Co., W. Va.

J. M. BROOKS & BROS'.

AMERICAN ITALIANS.

PURITY OF STOCK A SPECIALTY.

4-9 CIRCULARS FREE.

COLUMBUS, - BARTH. CO., - INDIANA.

SUCCESS!

"There's nothing *so* successful as SUCCESS." For many years past, we have labored to improve the Italian bee, aiming to obtain a strain of bees that would safely survive our coldest winters. That we can write SUCCESS upon our (apiarian) banner is indicated by the fact that even in this most disastrous winter, every colony of our large apiary is in fine condition. Others report fine success with our Italians. On March 14th, M. E. Loehr, of Palestine, Ind., wrote us that, last fall he had 98 colonies, and now all are dead but three—two of these being very weak. The other colony contained one of our queens, concerning which he says:—"I was surprised to find this colony strong and healthy, and am sorry I did not purchase all my queens of you, they being stronger in bees now than in the fall. Could say much more in praise of your bees." To the

READERS OF GLEANINGS

we would say: If you want bees that are peaceable, industrious, and hardy—in short, want to possess the BEST bees, **Try our Italians.**

OUR 40-PAGE CATALOGUE, FREE TO ALL.

5d **H. A. BURCH & CO.,**
SOUTH HAVEN, VAN BUREN CO., MICH.

---

15 One-Cent STAMPS

WILL PAY FOR OUR EXHAUSTIVE PAMPHLET ON RAISING, HANDLING, AND MARKETING EXTRACTED HONEY.

COLONIES WITH Imported Cyprian AND ITALIAN QUEENS OF OUR OWN IMPORTATIONS,

Guaranteed Pure and Genuine.

Our Comb Foundation was awarded the diploma at the N. E. Bee-Keepers' Convention held in February. The following letter will show its superiority:

Medina, Ohio, April 4, 1881.

To Chas. Dadant & Son, Hamilton, Ill.:

Please send me 10 or 15 sheets of your very nicest Dunham Foundation, 8½x17⅝. As I want them to get rubber casts from, I want them nice and true, and nicely packed; don't care what the expense is. I send to you because you have sent me the best specimens. A. I. ROOT.

SMOKERS, KNIVES, EXTRACTORS, ETC.

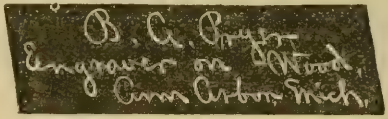
Price List with 3 samples of foundation, free.

CHAS. DADANT & SON,
5tfd **Hamilton, Hancock Co., Ill.**

QUEENS! ITALIAN QUEENS!

Bred from selected queens of my own importing. Sent by mail; safe arrival guaranteed.

Warranted! If any queen ordered of me proves hybrid, I will, when notified, send another, *free* (but in such cases unwarranted, just begun to lay). Queens in June, $1.15; after July 1st, $1.00 each. Discounts—on an order for 10 queens, one extra will be given; for 25, three extra. Write for discounts on larger orders. Tested queens, double above prices. CHAS. R. BINGHAM,
Edinburg, Portage Co., O.
Money Order Office, Ravenna, O. 5-7d



B. A. Pryor
Engraver on Wood,
Ann Arbor, Mich.

CHOICE QUEENS

FOR 1881!

Dollar Queens.............	$1 00
Tested "	2 00

I guarantee satisfaction every time, or money refunded. No blacks in my neighborhood. All queens raised from A. I. Root's imported stock. Send for circular. HOWARD NICHOLAS,
4-9d Etters, York Co., Pa.

ALBINO, ITALIAN, AND HOLY-LAND QUEENS, FULL COLONIES, ETC., FOR 1881!

I am prepared to furnish early queens, pure Albinos, Italians, and Holy-Land Queens, bred from select stocks. Warranted to be pure; safe arrival guaranteed. Also Hives, Novice's Extractor, and Apiarian supplies generally. Send for price list. Address
S. VALENTINE,
Double Pipe Creek,
3-5d Carroll Co., Md.

BEE-KEEPERS' SUPPLIES

It will pay you to get our prices before purchasing your Supplies. Good Langstroth Hives with 8-inch cap, frames, quilt, etc., in the flat, 60 cents each. Manufactured from good pine lumber. Workmanship unexcelled. Crates, Sections, Extractors, and Dunham Foundation, a specialty.
HIRAM ROOP,
2-6d Carson City, Montcalm Co., Mich.

BEES FOR SALE!

50 Colonies good healthy swarms of **Italian Bees at $10 each,** in nearly new, 8-frame, well-painted hives, delivered on board cars in good shipping order. E. H. SHERWOOD,
4-5 Fishkill, Dutchess Co., N. Y.

1881.

Send for our new Circular and Price List of Full Colonies, Nuclei, and Queens. We guarantee satisfaction. S. D. McLEAN & SON,
2-7d Culleoka, Maury Co., Tenn.

GRAPE SUGAR For Feeding Bees!

Send for our Price List before you buy.
3-5d **I. L. SCOFIELD,**
CHENANGO BRIDGE, BROOME CO., NEW YORK.

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Italian (tested) Queens from Root's very best.

Imported or home-bred Queens, $2.00; Italian (untested) Queens, Laying, $1.00; Bees, $1.00 per lb.; 2 (L.) frame Nucleus (no queen) $1.50; 3 (L.) frame Nucleus (no queen), $2.00; 1 colony of Italian Bees (no queen) in 10 (L.) frame hives, $7.00. Add price of queen to price of bees, colony, and nucleus. Discount on larger orders. OTTO KLEINOW,
6tfd Opposite Fort Wayne, Detroit, Mich.

D. S. GIVEN,
Inventor and Sole Manufacturer of the
FOUNDATION PRESS.

All Presses warranted to give satisfaction. The only invention to make fdn. in wired frames. Our thin and common fdn. for '81 is not surpassed. Send for Catalogue and samples.
4-6d D. S. GIVEN, Hoopeston, Illinois.

ONE-PIECE SECTIONS A SPECIALTY.

Pound and Prize size, $4.50 per 1000. Sample section free. BYRON WALKER,
6d Capac, St. Clair Co., Mich.

ITALIAN QUEENS, untested, $1.00; tested, $2.00.
6d Rev. W. H. Steele, Kossuth, Alcorn Co., Miss.

SPEAK Can receive a few more orders for Italian Queens. Prices, 80c, $1.00, and $1.50. E. A. THOMAS, Coleraine, Franklin Co., Mass. **QUICK**

FOR SALE CHEAP!

A new Everett Extractor, and a lot of hives and honey sections. E. A. GASTMAN,
6 Decatur, Macon Co., Ill.

ITALIAN QUEENS!

From select imported or home-bred queen.
Tested, in June, - - - $2 50; after, - - $2 00
Untested, in June, - - - 1 25; " - - - 1 00

Bees, with tested queens only, price same as untested queens. All queens warranted to be purely mated. Safe arrival and satisfaction guaranteed.
6 S. A. SHUCK, Bryant, Fulton Co., Ill.

LIVE BEES IN MICHIGAN!

Italian Queens, Bees, and Supplies; also Dollar Queens the rest of the season. Descriptive price list free. Address O. H. TOWNSEND,
6tfd Hubbardston, Ionia Co., Mich.

ITALIAN AND CYPRIAN QUEENS, bred from imported mothers. Write for prices to
H. T. BISHOP,
6-7d Chenango Bridge, Broome Co., N. Y.

The Latest Offer!

We will furnish Comb Foundation, made on the Dunham latest improved machine, and warranted to be as good as any in the market, for 35 cts. per lb. I have a large amount just made up, on hand ready for orders. Will work up wax for 10c per lb. Send for circular. F. W. HOLMES,
6 Coopersville, Ottawa Co., Mich.

1881 **IN THE MARKET!** 1881

Owing to the great demand for bees, I have concluded to furnish them at the following prices: Four-comb Nucleus, with Italian queen, in the Roop frame, $4.00; for each comb less, deduct 50 cts., and for larger Nuclei, add 75 cts. per comb, up to full colonies (12 combs) $10.00. F. E. TOWNSEND,
6tfd Hubbardston, Ionia Co., Mich.

FOR SALE CHEAP!

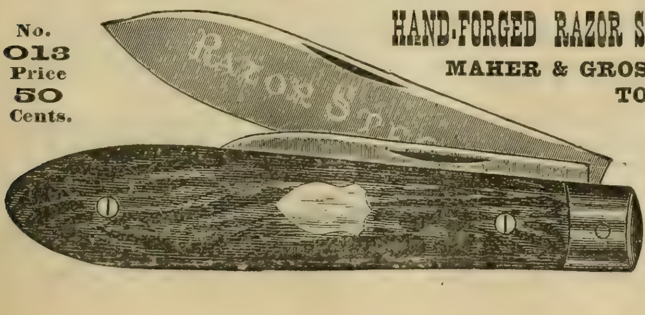
A few fine Colonies of Italian Bees in Langstroth hives. Hives well made, and painted. Address at once, W. G. SMITH, 213 N. Second St., St. Louis, Mo.

C. OLM'S COMB FOUNDATION MACHINE.
SEND FOR SAMPLE AND CIRCULAR.
5tfd **C. OLM**, Fond du Lac, Wis.

HIVE MANUFACTURERS.

Also imported and home-bred Queens, Full Colonies, and nucleus colonies. Bee-Keeper's Supplies of all kinds. Market price for beeswax. 4-7d
NICHOLS & ELKINS, Kennedy, Chaut. Co., N. Y.

No. 013 Price 50 Cents.



HAND-FORGED RAZOR STEEL KNIFE FOR 50 CENTS!

MAHER & GROSH, 34 N. MONROE ST., TOLEDO, OHIO.

Hand-Forged Razor Steel Knife for 50 cents. Maher & Grosh, 34 N. Monroe St., Toledo, O., will mail Knife like cut, post-paid, for 50c. Extra heavy 2-blade for rough usage, 75c. *Our Best* 2-blade, oil temper and tested, $1. Pruner, oil temper, $1. Pruning Shears, $1. All goods exchanged free if soft or flawy.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Newark, Wirt Co., W. Va. 2-1
*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 1tf
*E. M. Hayhurst, Kansas City, Mo. 1-12
*Paul L. Viallon, Bayou Goula, La. 1tfd
*D. A. McCord, Oxford, Butler Co., O. 1-12
*S. F. Newman. Norwalk, Huron Co., O. 1tfd
*J. T. Wilson, Mortonsville, Woodford Co., Ky. 6-6
*Chas. G. Dickinson, Sou' Oxford, Chen. Co. N. Y. 1-10
*Wm. Ballantine, Sago, Musk. Co., O. 2tfd
J. S. Tadlock, Kingsbury, Guad. Co., Texas. 3-7
*W. H. Nesbit, Alpharetta, Milton Co., Ga. 3tfd
*J. O. Facey, New Hamburg, Ont., Can. 4-9
*H. Nicholas, Etters, York Co., Penn. 4-8
W. S. Canthen, Pleasant Hill, Lan. Co., S. C. 4-6
*John Conser, Glenn, Johnson Co., Kans. 4-9
*Fischer & Stehle, Marietta, Wash. Co., O. 4-9
*Jas. P. Sterritt, Sheakleyville, Mercer Co., Pa. 5-10
H. Barber, Adrian, Len. Co., Mich. 5tfd
*Oliver Foster, Mt. Vernon, Linn Co., Iowa. 5tfd
*V. W. Keeney, Shirland, Win. Co., Ill. 6-9
*C. B. Curtis, Selma, Dallas Co., Ala. 6-11
*T. W. Dougherty, Mt. Vernon, Posey Co., Ind. 6
*L. E. Welch, Linden, Gen. Co., Mich. 6tfd
Geo. W. Baker, Lewisville, Henry Co., Ind.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
Sid. D. Buell, Union City, Branch Co., Mich. 2-7
P. L. Viallon, Bayou Goula, Iberville Par., La. 1tfd
S. F. Newman, Norwalk, Huron Co., O. 1tfd
J. F. Hart, Union Point, Greene Co., Ga. 4-3
M. S. West, Flint, Genesee Co., Mich. 2-7

Foundation Manufacturers.

Who agree to make such foundation, and at the prices given, as described in our circular.

A. I. Root, Medina, Ohio.
Jas. A. Nelson, Wyandott, Wyandott Co., Kans. 4-9
E. S. Hildemann, Ashippan, Dodge Co., Wis. 4-6

Bees by the Pound.

Those whose names appear below agree to furnish bees by the lb., and at the prices given in our circular.

I. L. Scofield, Chenango Bridge, Broome Co., N. Y.
S. C. Perry, Portland, Ionia Co., Mich.
J. P. Moore, Morgan, Pendleton Co., Ky.
W. R. Whitman, New Market, Madison Co., Ala.
Chas. Kingsley, Greeneville, Greene Co., Tenn.
C. D. Wright, Baxter Springs, Cherokee Co., Kans.
H. B. Harrington, Medina, Medina Co., O.
W. St. Martz, Moonshine, Clark Co., Ills.
O. H. Townsend, Hubbardston. Ionia Co., Mich.
G. W. Gates, Bartlett, Shelby Co., Tenn.
Fischer & Stehle, Marietta, Washington Co., O.
W. S. Canthen, Pleasant Hill, Lancaster Co., S. C.
J. G. Taylor, Austin, Travis Co., Texas.
T. P. Andrews, Farina, Fay. Co., Ill.
Allan D. Laughlin, Courtland, Law. Co., Ala.
E. J. Atchley, Lancaster, Dallas Co., Texas.
D. McKenzie, Carrollton P. O., N. O., La.
H. L. Griffith, Sumner, Law. Co., Ill.
J. H. Martin, Hartford, Wash. Co., N. Y.
W. A. Pirtle, Cabot, Lonoke Co., Ark.
E. T. Flanagan, Belleville, St. Clair Co., Ill.
J. K. Mayo, Stafford, Fort Bend Co., Texas.
J. F. Hart, Union Point, Greene Co., Ga.

25 Black Queens *for sale*, 30 cents each, free by mail. T. F. WITTMAN & CO.,
6d 4109 Hutton St., Philadelphia, Pa.

HEADQUARTERS IN THE SOUTH

For the Manufacture and Sale of

BEE-KEEPERS' SUPPLIES!

Italian Queens and Bees, all bred from mothers of my own importation. Dollar queens, $1.00. Tested queens, $2.50; 4-frame Nucleus, $5.00. Safe arrival and satisfaction guaranteed. Send for my illustrated catalogue.

PAUL L. VIALLON,
6tfd Bayou Goula, Iberville Par., La.

FOR SALE CHEAP

A few fine Colonies of Italian Bees in Langstroth hives. Hives well made, and painted. Address at once, W. G. SMITH, 213 N. Second St., St. Louis, Mo.

SEND for my circular and price list of Italian Colonies, Queens, and Apiarian Supplies.
5tfd H. H. BROWN, Light Street, Columbia Co., Pa.

ITALIAN QUEENS! I am prepared to furnish pure queens at a low price. Untested, in May, $1.00; June, 90c; after, 80c. Send for circular.
CHARLES D. DUVALL,
4-9d Spencerville, Mont. Co., Md.

An Italian Queen

FOR 15 CENTS.

We guarantee to every one who sends a dollar for the *American Bee-Keeper*, to send a pure untested Italian queen for 15 cents more.
4-7d E. M. HARRISON, Lebanon, Laclede Co., Mo.

VANDEVOORT FOUNDATION.

Ten square feet per pound. This foundation took the prize over all others for use in surplus boxes at the N. E. B. K. Convention. Send for samples.
5-6d G. W. STANLEY, Wyoming, Wyoming Co., N.Y.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Michigan,

Makes a *specialty* of rearing fine Italian queens. All queens bred from imported queens, and from the purest and best home-bred queens; and the cells built in full colonies. No black bees in the vicinity. During June, queens will be $1.00 each. Tested queens, $2.50 each. After July 1st, single queens, $1.00; six queens for $5.00; twelve or more, 75 cts. each. Tested queens, $2.00 each. Safe arrival by mail guaranteed. Send money by draft, registered letter, or by money order drawn on Flint, Mich., as Rogersville is not a money-order office. 6tfd

ESSEX PIGS A SPECIALTY!

75 to 100 Pedigree Pigs for delivery in June, six weeks to two months old. Write for prices.

Also Brown Leghorn (prize winners) EGGS, @ $1. per doz., and B. B. R. G. Bantam Eggs for Hatching (imported), @ $1.50 per doz., in new baskets. Safe arrival guaranteed. **C. W. CANFIELD,**
5tfd **Athens, Bradford Co., Pa.**

HIVES, SECTIONS, AND BOXES

Material for Langstroth Hives, including Brood-Frame, 40 cts. each; Lewis V-shaped groove One-Piece Section, any size to 6x6, $5.00 per 1000. Lewis One-Piece Honey-Boxes, all sizes, $2.00 to $4.00 per 100, including glass; Dovetailed Sections, any size to 6x6, $4.00 per 1000. Manufacturing experience of 20 years. Send for Price List.

G. B. LEWIS (Successor to Lewis & Parks),
Watertown, Wis., April 1, 1881.

* *N. B.*—There is *no patent* on the Lewis One-Piece Section. 4tf

---

GUARANTEED
Italian Queens!

I guarantee all my queens to be purely mated from imported mother. Safe arrival and satisfaction guaranteed. Send for circular. Untested Queens in May and June, $1.50. July and after, $1.00. Tested Queens, May and June, $2.50. July and after, $2.00. Select tested, $3.50.

Address— L. C. M'FATRIDGE, M. D.,
2-7d Carroll, Carroll Co., Ind.

Before Purchasing

any Italian or Cyprian bees, send for our 20th annual price list. Full colonies, Nuclei and Queens, at greatly reduced prices. Also headquarters for Apiarian supplies in New England.

WM. W. CARY & SON (formerly Wm. W. Cary),
3tfinq Colerain, Franklin Co., Mass.

NOW READY!

Our new circular and price list for 1881. We have something new for every bee-keeper. Remember, we are largely engaged in practical bee-keeping, and know what supplies of are most value in the apiary. You should see a description of our feeder. You will want one. Our new **Double-Draft Smoker** is perfection. See what one of the most practical and best-informed bee-keepers of the country thinks of it:—

"Since your great improvement in smokers, as regards to the double blast, you undoubtedly have the inside track of all the others in the market. This, with the superior workmanship and materials used, should place your smoker at the head of the list, and secure for it a favorable patronage for 1881."

G. M. DOOLITTLE.

Price of smokers: By mail, $1.50 and $1.75.
Our book,

QUINBY'S NEW BEE-KEEPING,

is pronounced the most practical work published. Price, by mail, $1.50. We furnish every thing used in advanced Bee-culture. Send for illustrated circular.

L. C. ROOT & BRO.
Mohawk, Herkimer Co., N. Y. 4tfd

J. M. BROOKS & BROS'.
AMERICAN ITALIANS.

PURITY OF STOCK A SPECIALTY.

4-9 CIRCULARS FREE.
COLUMBUS, - BARTH. CO., - INDIANA.

PURE BRED POULTRY.

I am now prepared to fill orders for eggs from the following: P. Rocks (Corbin strain), L. Brahmas, S. S. Hamburgs, S. S. Polish (Bearded), Brown Leghorns, W. C. B. Polands, Rouen and Pekin Ducks, Toulouse Geese and Bronze Turkeys. Eggs packed in the most approved manner. Poultry for sale in the fall. Send for Price List. Address

4-6 H. S. ROSS, Box 128, Seville, Medina Co., Ohio.

CYPRIAN, HOLY-LAND, HUNGARIAN, AND ITALIAN Queens & Bees!

I have had 20 years' experience in the queen-rearing business. All my queens are raised in full colonies, on a new principle, and we send out no in-and-in-bred queens. We combine beauty, purity, industry, and docility. I consider the Hungarian bees, crossed by the Cyprian or Italian, the best race in the world. They are very hardy, gentle, and industrious. Queens very prolific and large; they are sure to winter on summer stands. I did not lose one of these stocks last winter—all came out strong. Try them. All queens warranted pure. Safe arrival by mail guaranteed. Warranted queens, $1.00; choice selected, $1.50; tested, $2.00. Send for 20th annual circular. Remit by registered letter, check, or money orders on Salem, Mass.

6tfd HENRY ALLEY, Wenham, Essex Co., Mass.

HEADQUARTERS FOR
Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new circular. Address

1tfd DR. J. P. H. BROWN, Augusta, Ga.

1881 ITALIAN QUEENS! 1881

Tested Queens........	$1 50
Warranted Queens	1 00
Cyprian Queens, untested	1 00

As most all the Dollar queens I sold last year were pure, I will warrant them this year.

J. T. WILSON, Mortonsville,
2-7d Woodford Co., Ky.

Vandevoort Comb Foundation

took the premium over Flat Bottom, Dunham, and all other makes at the N. E. Bee-Keepers' Association at Utica, Feb., 1881.

Price of foundation made on same machine,

1 to 25 lbs.,	for Section Boxes,......................	55c
25 to 100 "	" " "	50c
1 to 25 "	" brood chamber,....................	45c
25 to 100 "	" " "	40c

I. L. SCOFIELD, Chenango Bridge,
4-6d Broome Co., N. Y.

At Kansas City, Mo.,

I breed pure *Italian* and *Cyprian* bees for sale. I warrant my "Dollar" queens to be mated by pure yellow drones, and guarantee safe arrival and perfect satisfaction.

Tested Queens,	in	June - - - -	$2 50
" "		after " - - - -	2 00
"Dollar" "		in June - - -	1 25
" "		after " - - - -	1 00

Bees, per lb., same prices as Dollar queens.

Please address all letters plainly to

6tfd E. M. HAYHURST, *P. O. Box* 1131.

FOR SALE CHEAP

A few fine Colonies of Italian Bees in Langstroth hives. Hives well made, and painted. Address at once, W. G. SMITH, 213 N. Second St., St. Louis, Mo.

Do Not

Save Your Fowls!

and get Price List of High-Class Poultry, Eggs for hatching, Italian Bees, etc., by addressing J. R. LANDES,
3-6d Albion, Ashland Co., Ohio.

Fail

KIND WORDS FROM OUR CUSTOMERS.

I received the goods on the 20th that you shipped to me on the 13th, all in first-class order.
Adamstown, Md., May 21, 1881. J. C. MICHAEL.

The smoker came to hand yesterday in good order, and is "all my fancy painted." Many thanks.
M. C. SWAN.
Mason, Mason Co., Texas, April 11, 1881.

I think you are doing a good work. Your counter goods are a marvel for cheapness. I could not buy the same articles in this country for at least ¼ more than I pay you, postage included. WARREN FOOTE.
Glendale, Kane Co., Utah, Apr. 15, 1881.

I received the bees all right—not half a dozen dead ones in the lot. Thanks for promptness in sending, and good way of putting them up. I hope we may have better success in wintering in future than we had this winter. JOHN MYERS.
Stratford, Can., May 17, 1881.

You will be glad to know the tested queen and pound of bees came all right. I let them go upon 4 frames (and division-board) in a Langstroth hive. Each frame had good comb and honey two inches deep at top. Next day I looked and found the queen "at home." R. G. WARNER.
Columbus, Ohio, May 2, 1881.

The A B C is a larger book then I expected. It's a nice clean print, and easy to understand. I have received a good deal of good already, and have not read it all, yet I would not part with it for double what it cost if I could not get another.
A. S. LOBRE.
Saukville, Ozaukee Co., Wis., Apr. 13, 1881.

OUR 244-LB. SCALES FOR ONLY $4.50.

The goods and scales were all received in good order; the scales, we think, are very nice for the money. The rest of the articles are a wonder for the money. Highly pleased with the smoker. A neighbor wants a scale of the same capacity, 244 lbs.
ISAAC ELY.
New Germantown, Perry Co., Pa., April 13, 1881.

The A B C book is well arranged, and pleasant to read, and free from affectation. Novice and Blue Eyes look to be of the salt of the earth, and as such will be welcome in Carmel Valley, if ever they happen this way. EDW. BERWICK.
Monterey, Cal., April 4, 1881.

[Many thanks, friend B., for kind words and invitation; but if you lived next-door neighbor to Novice and Blue Eyes, you might think them both quite commonplace people.]

Please accept thanks from two more of your many customers for your prompt manner of shipping goods. Our box of supplies for the apiary arrived in good condition, and gave entire satisfaction, both for quality and price; freight charges were also reasonable. Perhaps we shall be able to send you a much larger order next time.
V. H. & L. D. ORMSBY.
Pierpont, Ohio, May 23, 1881.

It pays to take GLEANINGS. I bought a swarm of bees of E. A. Gastman, Decatur, Ill., and nuclei of S. D. McLean & Son, Culleoka, Tenn. They are both men to the mark. They were all that they were advertised to be. This is our first year for GLEANINGS, and we could not do well without it. I'm sorry I'm not a smoker, that I might reform and get a smoker by your liberal offer. Success to GLEANINGS. B. F. SNYDER.
Liberty, Ind., May 23, 1881.

"THINKETH NO EVIL."

[One of the kindest words I ever had, and if I felt sure I deserved it, I would consider one of the greatest compliments I ever received, is the following. It was at the close of a letter explaining why a promise had been neglected.]

As I know you are governed by that spirit of charity which "thinketh no evil," I am sure you will accept this explanation. ISABELLA HARRISON.
Walnut Creek, Cal., March 15, 1881.

[May God help me to make these words true, my good friend!]

GLEANINGS AS AN ADVERTISING MEDIUM.

If there is any one who is a little skeptical about GLEANINGS being a good advertising medium, let him insert a small advertisement in some out-of-the-way corner of it, and note the result. I was very agreeably surprised, myself, for no sooner had I commenced advertising in GLEANINGS than orders for colonies, nuclei, and queens, began pouring in, and they continue to come thicker and faster. May will be a busy month at Orchard Apiary if orders continue to come with such a rush as they have.
E. A. THOMAS.
Coleraiu, Franklin Co., Mass., April, 1881.

[The above was crowded out of the May No.]

Seeing that you are trying to induce your fellowmen to quit their bad habits, I would like to do something to help stop the use of profane language. Looking through an old work recently, I found the following, which may be of some use to you:—

"Two gentlemen having called at a coffee-house, and drank a bottle together, both insisted on paying for it. One put a piece of money on the table, and swore dreadfully that his friend should be at no expense; the other said, 'That piece is a bad one,' on which the other swore still faster.

"The master of the house, hearing what passed, said, if they would let him examine the money he would tell them whether or not it was good. Returning soon, he, in the most polite manner, laid it before them on a card, printed as follows:—

It chills my blood to hear the blest Supreme
Rudely appealed to on each trifling theme.
Maintain your rank; vulgarity despise;
To swear is neither brave, polite, nor wise.
You would not swear upon a bed of death:
Reflect; your Maker now could stop your breath.

"The gentleman read it, owned he was justly reproved, and would in future be more guarded in his language."

What will you charge for printing some cards with the above-quoted verse? Who knows, but the giving of a card to a friend when he is swearing, and at the same time ask God to bless the means we use, will stop some one from using profane language, and perhaps to lead a better life? A. T. M.
Abbeville, S. C., April 19, 1881.

[Many thanks, friend M. I will at once print a quantity of the cards, and they will be furnished free to anybody who will make use of them. Please say how many you want, and see that none are lost or wasted.]

I clipped a queen's wings for the first time a few days ago. I cut about half of each wing, and it took about an hour to do it. I think it was about the hardest hour's work I ever did. CHAS. O. MELOON.
Portsmouth, N. H., May 16, 1881.

[There is an excellent moral to your little story, friend M. I have often wished I could explain to the brothers and sisters why it is I am often apparently unaccommodating. One of you wrote a few days ago, and wanted us to make him a tent for handling bees, only about a foot longer than our regular size. To furnish it would cost him double the usual price, for we have them all made up in quantities, tied up, ready to ship. Several different hands have a part in the making of the pieces, and to get out a single one, with even a trifling difference in the size, would cost about as it cost you to clip your queen's wing. Our boys and girls will go right along rapidly at their regular work; but start them on some thing they are not used to, and don't understand, and, ten chances to one, they will be stopped an hour. Those who have plenty of leisure don't mind this; but with me, every minute and every hour has to be aggregated into a lump of cash out, every Saturday night. To ask a clerk to explain it would be an expense over again, and, to save myself, I am obliged to say, briefly, "Our regular tents are $1.00; one a foot longer will cost you $2.00." The difference is still more marked in other goods. A regular L. frame, filled with sections and starters, we can sell for 20c.; but Mr. Gray could hardly make a single one, of an odd size, for less than three times the amount; and to do this would necessitate changing the adjustment of our tools in a way that would cost us perhaps a still larger amount. This is why I have so strongly urged the importance of uniform hives, implements, etc. Now is an excellent time to get your hives uniform, when your bees are all out of them.]

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES AND HONEY, AND HOME INTERESTS.

Vol. IX. JUNE 1, 1881. No. 6.

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NOTES FROM THE BANNER APIARY.

NO. 19.

TO-DAY is May 11th, and I am so busy buying bees, getting them home, and transferring them, that I hardly have time to think of any thing to write, much less to put in shape for publication; like friend Heddon, I have been foolish enough to promise six regular contributions each month, and, having made the promises, they must be fulfilled.

ABOUT QUEENS.

A friend writes as follows:—

> FRIEND HUTCHINSON:—We organized an association here last week, and at the meeting we had quite a discussion about imported queens. Mr. Weed claimed that we did not need an imported queen to breed from, but I told him that we must change our Italian bees by imported stock, or very soon we will have nothing but black bees. Please give your views in next GLEANINGS.
>
> OTTO KLEINOW.
>
> Detroit, Mich., May 9, 1881.

If we are always careful to rear our queens from pure queens, I do not see why we can not keep our stock pure without an imported queen; but there seems to be a "vim" about imported stock that is obtainable in no other way, unless it is by crossing with the blacks. I think a *good* imported queen is very desirable property; but friend Root has hit the nail on the head (I had my hammer all ready to strike, but he was a little ahead of me) in his remarks on page 237. You know that I told you, last month, that I brought through only one colony, and that was a swarm of blacks that I bought last fall, of a man who had 23 swarms. All of his bees, except one swarm, died last winter. Now, if I were not rearing queens for sale, I should keep this black queen, and breed from her; but as it is, her head has been off some time. I tell you, my friends, I believe some of us are paying too much attention to the *looks* of a queen; we should pay more attention to the bees that she produces, and to what these bees *do*. I have seen some extra good swarms of bees that had very commonplace-looking queens; just the same as some of us smart men have very ordinary-looking mothers. (No offense intended.)

Neighbor Long has a queen three years old, the daughter of an imported queen, that has always outstripped every queen in his apiary, and her swarm has always stored the most honey, and has always come through the winter in good condition. Out of 28 queens, neighbor L. brought through only 5 this spring. This queen was one of them. Now (as friend Doolittle says), I should prefer queens reared from this queen to those reared from an imported queen that had not been thoroughly tested.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

I agree with you, friend H.; and the matter of choosing a queen to get cells from is one that has just come up in our apiary. I have had nearly a hundred nice queens, reared from imported mothers last season by neighbors Rice and Dean, to choose from. I should have used the red-clover queen largely, but she, too, is dead. All of my own imported queens were lost. After considering the matter from all points, I felt that I would prefer to have queens reared to send out to you, from one of our finest imported queens, and so we are using her. We should use, also, an imported Cyprian or Holy-Land queen, but I believe none have wintered over in Medina Co., and friend Jones does not seem to have any just at present, either.

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DOOLITTLE ANSWERS QUESTIONS.

IMPROVEMENT OF BEES.

I SEE in May GLEANINGS that Doolittle is called upon to answer a few questions, first of which is by J. F. Floury, in regard to breeding bees for honey, or breeding from imported stock. I wish to say about this, as I should on all other matters of improvement, that if we settle down on the idea that we have the best stock in the world, and that we will try no further, but breed our own to perfection, we may soon find ourselves behind others. Well, what shall we do? buy an imported queen and breed wholly from her? No: do as those who are successful in improvement do; i. e., if you have a good thing, which you believe to be such, use that as a means of success mainly; and in addition, try, on a small scale, any thing that looks like being an improvement on what you already have; and after you have proved such to be the case, adopt it, to the exclusion of the other. For instance: as we are talking of improvement of bees, you will see on page 21, GLEANINGS for Jan., 1881, I say, "Five hundred dollars would not hire me to breed all my queens from an imported mother, and let my present stock go down." Now, while this is the truth, still it does not debar me from trying different queens, both imported and otherwise, to see if by some of them I can not improve the stock I now have. Last season I bought a queen from A. I. Root's red-clover queen, and one from another party, both looking toward improvement. Now, while the latter proves to be of no value, I think the former promises success, for both her colony and those of the five young queens I reared from her wintered far better than the average of my old stock of bees. While I can not say positively what they will be as honey-gatherers, yet, should they prove equal in that respect to my old stock, it will be seen I shall have made an improvement by getting this stock in my yard. To sum up, "prove all things, and hold fast that which is good."

CARE OF SURPLUS COMBS.

Next: E. D. Howell wishes to know how Doolittle cares for empty combs to keep moth worm from destroying them; and friend Root thinks Doolittle has bees enough to cover them by the time warm weather comes. This is a mistake, for I have summered over from two to five hundred for the past two seasons, and it looks at present as if I should carry over 1000 the present season. To preserve them, I had a cupboard or small closet built, in which I could hang on racks 250 combs, which filled the room to within two feet of the bottom. Fill the room with combs, or put in what you have; get a kettle and place some ashes in it; put in a shovel of coals, and on this pour 1 lb. of sulphur for every 100 cubic feet contained in your room. Shut the door, and, if necessary, cork all tight with strips of cloth; then leave it for 48 hours, at which time you can take them out and put more in if you have them. If you wait till the eggs which are in the combs are pretty generally hatched, once sulphuring seems to suffice unless the combs are where the moth miller can get at them. From experiment, we have found the above amounts of sulphur to be none too much, for in case of matted webs or cocoons, if less is used they will not be killed.

WHAT BECOMES OF BEES WHEN ROBBED?

Next we come to "comments on Doolittle's comments," by A. A. Bradford, of New Hampshire, where he asks, "If the bees that are robbed do not go with the robbers, where do they go?" It is a well-known law which governs the economy of the hive, that all bees which die leave the hive *to die*, if the weather will permit them so to do; hence at all times, except during freezing weather, we find no dead bees in or about the hives after the first clearing-out in the spring. If a colony becomes queenless so as to die, the bees one by one depart from the hive as death approaches, till all are gone. Now, as far as my experience goes, this is what becomes of the bees when robbed; and if, as alleged, the robbed bees go home with the robbers, and even help, after being conquered, in carrying the honey away from their once happy home to that of a stranger, it is some thing that has never come under my notice. But I have frequently seen the bees, when robbed during early spring, perish in the hive by starvation, and also when warm enough to leave the hive one by one till all were gone. Friend Root says, on page 182 of GLEANINGS, that he has had cases where the bees from a robbed hive went home with the robbers. Will he please tell us how they acted when going home with the robbers, and how he knew that it was the robbed bees that were going to the hive of the victors?

Borodino, N. Y., May 20, 1881. G. M. DOOLITTLE.

[*To be continued.*]

I know the robbed bees went along with the robbers, friend D., because none were left in the hive after all the honey was out, and the robbers were greatly increased in numbers. The robbers had a queen, and the robbed, none. I watched the whole proceeding, but I do not now remember any other instance where I saw it all so plainly.

SENDING GOODS BACK.

IT seems pretty hard for some of the brethren to get over the idea of sending things back, if they are not just as they should be, or even if they imagine such to be the case. Last season a customer mailed a queen back, a long trip, because she did not seem very lively, and some have talked of sending bees back, because a part of them were dead. Please, friends, do not think of doing such a thing; but, out of kindness to the poor little sufferers, if nothing else, take care of them the best you can, as if it were your own mishap, and I think you will always find the shipper disposed to be neighborly. Any one who has bad luck in shipping bees needs all the help and assistance we can give him. Do not, I pray you, think of being so unkind as to send any thing back until you have first notified the shipper, and then he can give such directions as to the disposal of the goods as he thinks best. If you get a queen that is feeble after a long trip, put her on a comb of fresh honey, in the Peet cage, the very hour you get her, and then report.

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THE RUBBER-PLATE FOUNDATION MACHINE.

THE rubber plates for making fdn. are a success, except in two points. The first is, that we have not yet succeeded in making fdn. with them as thin as that made by the rolls, or even on the plaster casts; but as it is soft dipped wax, with excellent side walls, it will all be used by the bees, and is probably economy in the end. About 5 square feet per lb. is what the machines will probably average. The second trouble is the trimming. Unless we make larger sheets than we need, pile them up and trim with a knife, as we do with the rolled fdn., it takes more time to do the trimming than to make the sheets. It will work on wire without trouble; but if made in a wired frame, the surplus wax around the edges will stick to the wood of the frame. Who will solve this problem? We have sent out about half a dozen machines, and will doubtless soon have reports from them. The prices are as given in April No. We have at present rubber sheets for the L. frame only, about 8⅝ by 17⅛; but of course we can easily cut them down to any thing smaller. The price of the above is $5.00, and they can be sent by mail for 80c.

◆

ANOTHER IMPLEMENT FOR WIRING FDN. IN FRAMES.

SOME time last winter, W. W. Bliss, Los Angeles, Cal., sent us a little wire, to be used instead of the Blood roller, for fastening fdn. against the wire, in wired frames. We have had no occasion to use it until recently. We find now, that our girls work it more rapidly, and it does better work, than the roller. After using it a while, I picked up an ordinary button-hook, such as ladies use for buttoning their shoes, and after filing a little groove in the back of the hook, so it would not slip off the wire, I found it was even better than the wire friend Bliss sent. You want your frame all wired as usual, and your sheets of fdn. cut so as to just fill the frames. Have a board also, cut so as to just slip inside the frame. Lay the wired frame over the board, and put the sheet of fdn. between the diagonal and upright wires. Now run your button-hook along on each wire, with force enough to imbed the wire slightly. Turn the frame over, and do the same with the diagonal wires, and it is ready to hang in the hives. We can mail you a hook, already grooved, for 10c., if you can not make one cheaper. Of course, the Given machine does all this cheaper, but it costs $40.00, and everybody can not afford one.

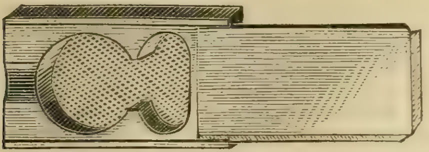
FRIEND ALLEY ON QUEEN-CAGES.

ALSO SOME REMARKS IN REGARD TO SENDING QUEENS BY MAIL.

I SHALL use a sponge filled with honey instead of sugar candy. Experimenting with candy last year cost me the loss of many queens. I do not lose one queen in fifty with sponge and honey. Now I will explain about the cage. It is made ⅝ inch wide, so as to give more space of sponge to the bees, thus making the food hold out longer. In shipping, the tin might press in: but as I make them the tin is on solid against the wood on all sides, and can not press in.

In shipping 2, 4, 6, or more queens at one time, I will place the wire face to face, but reversing the sponges, so that the bees in one cage can feed from the sponge in the other. In shipping 3 queens, I will make the tin one inch shorter, and cover the sponge with wire cloth, and then the bees in all three cages can draw food from their neighbors. Bees in such cages will live from 2 to 3 weeks. I think the pressure of the wire cloth will hold the sponge in place; if not, drive a sharp nail through the side into it. Half a dozen bees to a cage will be all the company a queen will want.

To put the bees in the cage, keep up the corner of wire not nailed down, and raise it with the index finger. The spring of the wire will keep it down. I have done this all my days.



ALLEY'S IMPROVEMENT ON THE PEET CAGE.

I can bore the holes in them with power, and can do it much quicker than I can nail them up. Then again, the cages used to-day are much stronger and neater. I have put a few bees in them, and covered the tin with paper, to keep the bees away from the cold tin. I have no idea that the bees will be alive when they get to Medina, as they have not had a chance to fly for a few days, and the weather is too cold to ship them. Cloth would be much better than paper to protect the bees against the cold tin. My object in sending these cages is to have you make some improvement, if any can be made. My experience in the queen-shipping line is as extensive as almost any one's; but it takes everybody to know everything. I have bothered over cages more or less for a month past, and have finally settled on the style sent you to-day. H. ALLEY.

Wenham, Mass., April 16, 1881.

The principal feature of the above cage is the manner of holding the tin slide. This slide has each side folded up partially, say at about an angle of 45 degrees. Well, grooves are cut for this slide to slide in, on the same angle, near the edge of the cage, as you see in the cut. These grooves need to be far enough from the edge so there will be no danger of splitting out. We will place $5.00 to the credit of friend A. for this simple device, and I expect to get my money back by making you such cages for 6 cts. each, or 50 cts. per doz.; you may have a sponge or candy in them, as you choose. My experience with the sponge of honey has resulted in so much daubing of all parties interested, as well as the bees, that I have given it up in favor of the candy. Friend Moore and others use candy and a sponge too. In making them by the quantity, we shall use thick basswood plank, and after boring the holes into the edge of the plank by machinery, the cages will be sliced off with a saw, planed on both sides, groove cut for the slides and wire cloth, in long pieces, and then the cages will be cut up. By sliding the wire cloth into a groove just like the one that holds the tin, the rough edges are covered, so if you put a cage into your pocket, it is not going to catch on your handkerchief, etc. The idea of putting two together, so the bees can get candy or honey through the wire cloth of the next one, is also a brilliant conception, if I may be excused. By leaving off one tin and one wire cloth from two of them, they can be tied together, so as to send a single queen long distances. I very much dislike so many changes, but I think this cage offers sufficient advantages in the two features mentioned, as well as cheapness. I should put the bees in by drawing back the tin slide. The bees mentioned came all alive.

FRIEND FLANAGAN'S FIRST EXPERIENCE IN SELLING BEES BY THE POUND.

ALSO SOME HINTS ABOUT GETTING THEM TO SELL.

YOU see, we sent friend F. some orders to fill, and here is what he says about it:—

Friend Root:—Don't scold. On coming back from the express office this evening I went to introduce a young queen (virgin) to the nucleus from which I had taken one of those I sent out. I thought I would see how many bees they had, and if they would need more in the place of those removed; and behold, on the second comb, the queen as large as life. I felt bad, I tell you. No chance of getting her with her bees, as the express had left an hour before. I went and got a Peet cage, caught her and about 15 bees, and will send her by mail in the morning when I post this letter, and will write to Loveland and explain how it came that there was no queen with one of his packages. In the other I caught her majesty after I had caged and weighed the bees, so I am sure *one* is all right. I saw her (the one that was left) on the comb when I shook it into the tunnel, but she must have taken wing instead of going down with the other bees. It has taught me a lesson that I will try to profit by. And now for a question or two, and then a little chat, and I will bid you good-night.

In selling bees by the pound, is it safe to shake in, or, rather, take other bees, than the ones in her nucleus? How do you manage to get enough bees for 1 lb. when the queen is in a nucleus that has but barely that amount? I had to give young bees to both of the nuclei I took those out of this evening, to protect the unhatched brood.

Now, do you want to know how I have my colonies so strong? I will tell you. Candy did it. I made up a liberal supply along in Feb., and put it on every colony right on top of the frames; and as fast as they used it up I put on another, even when they were bringing in pollen from the elm and maple, and later from the fruit-bloom. Lift a cover when you would, you would find the young bees at the candy, and at it at night as well as day, and especially the stormy, rainy, cold days; then the whole force would be at it. Some one said, when he saw me lift off the slab of partly used candy, when I went to show him my bees, that it was too expensive; that I would never get my money and labor back; but I believe that 2, or at least 3 lbs. of candy will make at least 1 lb. of bees; and as long as I can sell at present prices, it will all come back, with compound interest too; and then the satisfaction of having booming colonies, ready to do all they can for you when they get the chance, is a satisfaction too great to be resisted. I must close. Send in the orders, and remember that I will be sure next time that the queen is there. E. T. FLANAGAN.

Belleville, Ill., May 20, 1881.

Well, now, friend F., isn't it a little singular that I have exactly answered you, on p. 275, even before your letter was written? I would not attempt to mix bees to send with a queen, for the strange one would be very likely to sting her, and that would leave your customer in a very bad predicament. We get 1 lb. from a hive, without trouble; frequently 2 lbs., and have, in a few cases, taken 3 lbs., even in the month of May. If too few are left, take some of the combs away, or bring some bees from another hive. I should very much like to know how many pounds of candy it will take to make 1 lb. of bees.

THE GIVEN FDN. PRESS, THIS PRESENT SEASON.

LAST year, after carefully reading all the testimonials in favor of the different fdn. machines, I concluded to get a "Dunham." It was, after some delay, received, and I did my best, for a novice, to make it work; but it was "no go," and I was very much discouraged with my want of success, but attributed it to my lack of skill. This spring I thought I would try the "Foster mold," believing any thing that he would send out would be worth the money. My experience with it you have already given to the public, and every word I said was true; and I still say that, for persons who need but a small quantity for their own use, it is *the* machine yet; but the plaster plates, and the shallow impressions, or, rather, the low side walls and rather thick base, or septum, was a drawback. Thinking over what Heddon had written in regard to the "Given machine," and having considerable confidence in his judgment, I wrote for one, and have given it a fair trial, and I am compelled, in justice, to say that, for ease of manipulation, correctness of work, and perfection of all that one desires in comb fdn. (*thick or thin*), height of side walls and thinness of septum, it is ahead of all. I don't want a better machine or better fdn.; and then you can put the wires in in such a manner that they are completely covered, and no brood injured. I have written this without the knowledge or consent of the inventors. And I can indorse every word that Heddon said of it last year. E. T. FLANAGAN.

Belleville, Ill., May 6, 1881.

We have, within a few days, received of friend Given some wired frames, filled with fdn., that are certainly handsome, and he without question deserves great credit for so pertinaciously pushing his invention along to its present state of perfection. The fdn. is not as soft, and I should say not as easily worked out by the bees as that made on the rubber or plaster plates: but as it is done rapidly, and with a great degree of economy of wax, it must certainly come greatly into use. Who will take the next step, and make the rubber plates put the sheet into the wired frames?

MRS. LUCINDA HARRISON'S TALK TO THE CHILDREN.

MY DEAR YOUNG FRIENDS:—I've just finished reading your letters in May No. of GLEANINGS, and I asked myself how many of these boys and girls are trying to do some thing useful. We are delighted that Mollie E. Canoles makes surplus boxes; this is hitting the nail right on the head, isn't it? It does not require much strength to make them, but skill and tact. All little boys love to drive nails, and why should not the girls too? Not only know how to drive them, but do it properly, so that they will not split, or the nails bend.

We do not like names that end in *ie*,—Johnnie, Mollie, etc. The police reports are full of such names. Mary is a beautiful name, and it seems like bad taste to change it to Mollie, which is a more suitable name for a horse than a girl or woman.

You have all heard of Simpson's honey-plant, have you not? It is called by this name, because Mr. Simpson found out that it is a good honey-plant, and told Mr. Root and other bee-keepers about it. We saw Mr. Simpson at a bee-meeting, and he looks as if he would enjoy doing a kind act. He said that he had a little boy, seven years old, who, when the bees swarmed, ran up to the hive, and caught and caged the queen as she came out. I've tried to catch the queens in this way, but my fingers are not nimble enough, and I have a kind of ague, like the hunters have when they aim at a deer. They tremble, and call it "buck's ague." I'm glad that they do have it, for I do not like to have the pretty deers killed; do you? MRS. L. HARRISON.

Peoria, Ill., May 23, 1881.

CIRCULARS AND PRICE LISTS RECEIVED.

W. G. Russell, Millbrook, Ont., Can., sends us a one-page circular of apiarian supplies.

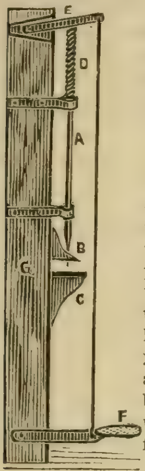
A. W. Cheney, Kanawha Falls, W. Va., sends us a well executed cheirograph circular of one page, giving prices of Italian bees and queens.

O. H. Townsend, Hubbardston, Ionia Co., Mich., sends us a very full 8-page catalogue of apiarian implements.

G. W. Baker, Lewisville, Ind., issues a postal price list of Italian queens only.

MACHINE FOR PUNCHING FRAMES.

WE have had a hard winter on bees in this part of the country. I think nearly one-half of the bees in this county have died, and in most cases they have died for want of proper packing.



I have made a cheap machine for punching frames for wire, which does the work so nicely that I thought I would send you a pencil sketch of it. The diagram and description will make it all plain. Make one, and see if the boys don't think it is fun to punch frames with it.

A is the punch-bar, made of ⅜ steel rod, 12 in. long, with head and washer on upper end, and lower end drawn out to a fine chisel-pointed punch. B and C are blocks to hold the frame while being punched. D is a wire coil spring which withdraws the punch every time. E is a lever. F is the treadle. G is a wooden post 2x4 which you can make any height you want, and fasten to the wall where it will be most convenient. Lower half of punch-bar is made square to keep from turning. J. A. OSBORNE.

Rantoul, Ill., March 23, 1881.

Thanks, friend O. Your plan is quite ingenious; but we use, for the purpose, a gang of drills that bore a bundle of top and bottom bars at once. For drills, we use wire nails filed at the end, some thing like a brad awl. If one breaks, it takes but a moment to replace it. Wired frames are getting to be a standard article. Our trade in them this season is much greater than it was last, and any device to help make them accurately and rapidly is of course a boon to the "boys."

DOES IT PAY TO PACK BEES IN CHAFF OR COTTON SEED IN TEXAS?

FROM AN A B C SCHOLAR.

THE winter of 1880-'81 has been the severest we have had in Texas for many years. We have had two snowstorms, the snow lying on the ground for four days, and the ice was thick enough to bear up a horse.

And now I want to prove that, in the severest winters in Texas, only the weakest colonies need to be packed with chaff or cotton seed. If you must pack them, use cotton seed, as you can get it for 4 cts. per bushel.

Mr. Carroll, of Navarro Co., Texas, says, on p. 238 of **GLEANINGS**, that it *does* pay to pack bees; so I suppose he packed all of his, not leaving one colony unpacked for experiment, and therefore he really does not know whether it pays or not.

I was sick about the time the bees ought to have been packed, and after I got well I had only time enough to pack the weakest colonies before it was too cold to handle them. I had no chaff cushions, and did not think of cotton seed, so I did it in this way: I cut oat straw the exact length of the frames, and after removing one of the empty combs on each side of the hive, packed the straw on end in its place. In this way I could contract the inside as much as I wanted by removing more frames. I packed only five of the swarms in this way, but I'll never do it again.

My first swarm came out only two days after Mr. Carroll's, and was from a hive that had *not* been packed, and another bee-keeper of Austin had a swarm a few days before mine.

I had 13 colonies in the fall; brought them all through safely until April, then the robbers began; they robbed one strong colony of their stores, and in the late freeze, April 14, they were killed; this is the only swarm I have lost. I now have 15, including new swarms.

All of my bees wintered on honey from the bitter-weed, and are now bringing in honey from the mesquite and hoarhound. The horsemint is commencing to bloom, and I will get my main crop from it. I think I will send you a section of horsemint honey in the summer, and you will think it is at least next best to clover honey.

We have had nearly a whole week of steady, soaking rains, and I think there will not only be a large honey crop, but a great increase of bees.

Can not some other Texas bee-keepers let us know their opinion on chaff packing in Texas? I am willing to "give in" if I am wrong.

Mr. Root, can you not give us a column of "Seasonable Hints" every month? W. L. STILES.

Austin, Travis Co., Texas, May 7, 1881.

Why, friend S., you conclude your letter saying one of your strongest colonies was frozen out April 14th, and yet you don't believe chaff packing would pay! It is true, they were robbed; but if they were strong and well protected, I do not quite see how they could have been robbed. Again, I do not quite agree that your method of using long straw is equal to close chaff packing. May be I am too strong on chaff, but I think it pretty safe, even yet. I have often thought of "seasonable hints;" but it always rises up before me that your honey harvest will be over before some other brother up North has commenced; and how could I manage to strike you all? It is true, I might tell you what to do during corn-planting time and fruit-blossoming time, and so on, but you can already find that in the A B C.

HOW TO WINTER BEES.

THE HONEY OUTLOOK.

IT is a source of great satisfaction to us who have been mourning over dead bees—yes, whole colonies of them,—from the late cold winter, to read May **GLEANINGS**, where we find that those whom we regarded as the most careful bee-keepers have lost yet more heavily than ourselves, and therefore we get courage to stand right up in the class and tell you we know how to winter bees. The most careless observer in this section can not fail to note that, where bees have perished in the hive, they have been found invariably clustered *on empty combs*, and of course the inference is fair, that they died from starvation. I went into winter-quarters with 42 colonies; only about 12 of them, however, were of full strength, and 6 of them at least were but nucleus colonies. To preserve these small colonies with their queens I bought two hat-boxes of our hatters, and set in the bottom of it a 3-

frame nucleus hive, which left a space around it and under it of about 4 inches, which I packed with chaff, and made an entrance at one end, sloping down well to prevent the entrance of storm; into this I placed three full frames of honey, taking care to punch several holes through each comb *near the top*, to allow for the passage of bees. Into this I placed one nucleus colony, and tacked a sheet of oil-cloth over them. I then tacked in two boards across the box above them, which made a hive just the size of the Simplicity; but I prepared this to receive two colonies by making two entrances, and packing the space between these boards and the ends of the box with chaff; a division was then made lengthwise of very light stuff (I made one of oil-cloth), and a chaff cushion was tacked on the inside of the box; three *very heavy frames* of *honey* were placed in each of these spaces, and a small colony was also put in each. They were covered over with oil-cloth, chaff, and a water-proof lid; another box was prepared likewise, and three more small colonies packed in it; the result of this is, that when our maples began to bloom this spring, no dead bees were in either of these hives, while my loss from other hives were fully one-half.

The lesson that is to be learned from this is just what you have so often insisted on, a *contracted hive* for wintering, and the accompanying *heavy combs* of honey, which is a necessary result of contracted hive to prevent the exhaustion of stores. My heaviest losses the past winter were in my strongest swarms, where I thought contraction by division-boards unnecessary.

The loss in Chester and Lancaster counties, Pa., the past winter, has been fully one-half the number of swarms, and about two-thirds of all the bees. Judging from these figures, we should not predict more than one-fourth the ordinary crop of honey this summer; but looking at the splendid weather we have had the past two weeks, with the bees working uninterruptedly on maple, cherry, plum, dandelion, pear, and now on apple blossoms, I look for an unprecedented increase of bees: and, in fact, this is now verified, so that I look for about a half of the ordinary crop.

SHINGLE CHAFF TENEMENT.

I can say a word in favor of the shingle chaff tenement hive. Four strong colonies wintered in one with no dead bees; no division-board was used, but the fullest combs were placed together in each hive near the center division. S. W. MORRISON.

Oxford, Pa., May 7, 1881.

HEDDON'S REPORT.

WINTERING.

NOW the cherries are in full bloom, the apples are coming forth, the weather is fine, and all nature is gushing. Here is my report, after doubling up our light stocks.

We began the winter with 196 colonies (and not 212 as I reported; my man who ran the out apiary miscounted), and we have sold the Glenwood apiary, with 50 colonies. Sold 10 more to parties here and there, and have left 17. This makes 77 surviving out of 196. As it is very plain that the cause or preventive does not rest with any particular style of hive or mode of wintering, we must be looking toward some other cause. We plainly see that all methods of protection that tend to lessen the consumption of honey tend proportionately to alleviate the trouble. Now, as regards the best methods for the above purposes: In some localities, and in some seasons, each of the three, viz., cellars, houses, and chaff packing, seems to be the best. I believe that the house above ground is good when we do not have protracted open spells during the winter. In such cases, we can not keep down the temperature to a degree that will keep the bees quiet and easy. Then chaff packing is best, and cellar wintering next best. When the winter is extremely cold *clear through* (as the one just past), then cellar wintering and houses prove best. A large cellar with few bees within will, with proper care and arrangements, carry them through the warm periods of such winters as 1879 and '80. But this is expensive. Whenever the food has been sufficiently pure to be non-irritant, the bees have come through safely in all shapes; when it has been somewhat unwholesome, colonies packed outside have eaten enough of it to cause disease, while those in good cellars did not need to consume enough to engender the sickness. Then again, the food seemed to be so near rank poison, that cellars and packing both failed totally. If the above is correct, you will plainly see that, in a winter when the food is extremely impure and the weather mild, and opportunities for flight frequent, that colonies would die fearfully in cellars and houses, while they would do well on the summer stands, especially if protected. Now comes the question, What is this trouble in the food? I have said that, to account for all the cases that have come under my observation, it must be an animal secretion in the nectar (bacteria), or an excessive amount of vegetable matter in the same. I would be inclined to favor the vegetable theory, were it not for the fact that such secretion would be caused by climatic influences (that is, its yearly variations), which much more uniformly cover an extended area, than does its supposed effect, bee dysentery. The facts in the case better fit the bacteria theory. I this morning received a letter from friend Shuck, and he suggests the idea that vegetable matter is the cause of the trouble, but that it is not in the honey, but the next thing to it, the honey *cells*, called by bee-keepers pollen or bee bread. I am not sure but that the variation in the proportions of honey, water, and pollen, of which the bread is composed; the pollen prolificness of different seasons, and parts thereof; the tendencies of different stocks to store pollen; also the position in the hive that they happen to put it in, and then happen to occupy during winter; various causes inducing the bees to eat it, such as more attractive bread, less attractive honey, cold preventing their moving to select a choice; scarcity of honey in the proper place, etc., may account for all our experiences with the intestinal disease. "Let us reason together," and see if it will. If we conclude that such is the cause, then let us devise the cheapest and best methods of removing the said cause. Mr. Bingham and others have noticed, that pollen in excess is almost always present where dysentery rages. Undoubtedly, spring dwindling is the effect of milder forms or degrees of dysentery. My experience is, that colonies that winter perfectly, never spring dwindle; that those who think they do, did not examine closely enough to detect the milder forms of the disease.

I feel very confident that all the past talk about division-boards, ventilation, damp cellars, etc., etc., have at best only an indirect influence on the great and general cause. At least, I am willing to stake any little reputation I may have as a guesser, upon it. It may be natural, but not wise, to suppose that the method that proves successful one time surely will the rest. Not till we know the cause can we expect to prevent the effect with any certainty.

Dowagiac, Mich., May 11, 1881. JAMES HEDDON.

The "Smilery."

This department was suggested by one of the clerks, as an opposition to the Growlery. I think I shall venture to give names in full here.

TOO MUCH HONEY AND TOO MANY BEES, AND THE REMEDY!

I HAVE a rather queer complaint to make, in view of the great loss of bees reported in last GLEANINGS. Three years ago, I was taken very badly with the "bee fever;" had it *very* bad; bought some bees, went through all the glory of transferring, artificial swarming, etc.; wound up with 25 swarms. The second year they increased to 50, and last year to 100. If this keeps on, it will take a first-class saw-mill to furnish lumber, and the whole plantation will eventually be one vast bee-yard. Last year I put on sections and L. frames late, as a single box is too small for them in this hot section, and thought if I did not get any honey they might draw some of the fdn. out. They were left on all winter, and the result now is, that at swarming time, present date, I am taking off the sections full of sealed honey. I thought that I would be extracting L. frames; but with the exception of two or three outside, all are full of honey, and the rest are filled with brood, there seeming to be more in top frames than in those in lower box. Imagine the swarms they are turning out. I have taken them until I am sick of the sight of a swarm coming out; but it seems a pity to let them go off. There is no demand for them down here, and I presume it is most too far off to send them north, even if any one wanted to buy them. They are blacks and hybrids. I do not care to have over 100, as that is as many as my father can attend to, with what time I can spare. Mr. Viallon advised me to clip the wing of the queen; but would they not continue to swarm, and finally become disgusted and kill her? Mr. Bledsoe, of Natchez, recommended tearing down the queen-cells, except one, after the first swarm was out; but this would double the number every year. If I could sell the swarms I would not mind it. Can you give me any relief, or must I just let them go off?

GLEANINGS is very interesting, and I think improves every number. Hope you will succeed with the rubber plates for fdn., though I don't think any dipping plates will ever be better than the rolls, especially in a large apiary. H. B. SHAW.

Gum Ridge, Jefferson Co., Miss., May 4, 1881.

Why, friend S., just sell those bees by the pound. If our boys could just get into your apiary, they would soon stop swarming, by taking off the surplus young bees, and reducing things down to a point where I am sure you would be satisfied. Then just let the queens lay; as fast as more young bees hatch, shake them off the combs, and sell them again. It is ever so much more fun than taking off honey. If we can just get low rates on bees by express, we can take them from the South after the honey season is over, and bring them north and have them gather another crop. I verily believe it can be done.

Hurrah! hurrah! and once more, hurrah for A. I. Root's chaff hives and the Holy-Land queen from you! To-day, May 6, 1881, drones are flying (none of your drone-layers;) they are drones for swarming. The colony has brood in nearly all the 10 frames; drones hatching on the outside of the 9th and 10th frames. I have about 6 colonies that have some capped drone-brood. I expect some new swarms before May 15. My bees are working like beavers.

OTTO KLEINOW.

Detroit, Mich., May 6, 1881.

Why, friend K., whatever ails you? Don't you know that "one swallow does not make a summer," nor that one or two winters do not decide the merits of a hive? Why, I actually supposed you had got a swarm as big as a haystack, in the month of April, by the way you shouted when you started out. By the way, can you not turn in and help supply the brethren with pounds of bees? That is the way to show that you are thankful for your good fortune, is it not?

Bee Botany,

OR HONEY PLANTS TO BE NAMED.

THE plants mentioned below were sent us about a year ago, as you will see by the date of the letter.

HONEY-PLANTS FROM DENMARK.

As I see you speak so highly of the Spider plant as such a famous honey-producing plant, I am very desirous of trying it. American stamps I can not send, and cents are not to be had here, therefore I go on the principle that "fair exchange is no robbery," and herewith inclose 3 sorts of seeds of first-class honey-producers here, and will no doubt prove the same with you. *Scrophularia Crysanthus* is a species of the Simpson honey-plant, but flowers earlier, longer, and better, if sown early; flowers the first year.

Stachys lanata is a capital flowering plant, with white downy leaves, flowers the second year. *Arabis alpina*, a spreading plant of great beauty and worth to every bee-keeper; flowers with the crocus. In exchange for these I shall feel obliged if you will send me a few seeds of the Spider plant.

J. S. WOOD.

Nyborg, Fyen, Denmark, May 1, 1880.

The first of the three is now in bloom. The stalk and leaf bear quite a resemblance to the Simpson plant, and the flower also, only that it is in little groups or bunches, and is yellow. The honey glistens already in its little honey-cup. Many thanks for the kindness, friend W. We shall endeavor to save seed of the one mentioned, and will try to report in regard to the rest in due time.

WILLOW, ORNAMENTAL.

Prof. Beal answers in regard to the willow mentioned last month, as follows:—

This is some species of willow not certainly identified without leaves. It is now in flower. All bee-men must know that willows furnish both pollen and honey. I return sample, which I presume will still grow. W. J. BEAL.

ASPEN-TREE AS A HONEY-PLANT.

I this day took the privilege to send you by mail a bloom from a tree that grows in our village, which is a stranger to us in this part of the country. It blooms a week ahead of the maple or alder, and the bees are very fond of it. When in full bloom it looks at a distance as if it were in full leaf; and on a fair day the bees are there by the thousands, and when there comes a puff of wind enough to blow the bees out, it looks as if a swarm were settling there, and there are hundreds on the ground gathering up their loads. It lasts for two or three weeks. There is no one around here who knows the name of the tree, or where it came from. We have several other young trees which have some bloom on them this year. They are a very quick growth, and make a nice shade tree. If you are acquainted with the tree, I should like very much to know the name of it. I have never seen it mentioned by any writer on the bee or bee pasture. I think it is a tree that ought to receive attention by all who take an interest in bees, for it certainly is a great yielder of pollen. We have no basswood in this part of the country. If you have none of the kind, let me know, and I will send you a few cions next fall.

WM. T. HILTON.

Barnesville, Md., April 18, 1881.

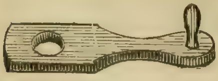
Thanks, friend H. We have a tree here that I think is at least pretty near the same. It does not, however, bear honey more than about a week, as it is so early the weather is often unfavorable for the bees to work on it. We call it aspen, sometimes "quaking asp," from the peculiarity the leaves have of being always in motion. To be more sure, we sent the specimens to Prof. Beal, and here is his reply:—

This is *Populus grandidentata*, large-toothed aspen, a tree common in the Northern States. In size and vigor it is midway between the common small aspen and the cottonwood. W. J. BEAL.

Agricultural College, Lansing, Mich.

WINDING THE WATERBURY WATCH.

I NOTICE you advertise the Waterbury watch for sale. I have one, and I can indorse every word you state in its praise, as to cheapness and accuracy. I have carried mine 15 months nearly. As for its durability, time alone can tell. In regard to winding it up: The long spring so annoyed me for a few days, I decided that I would not submit to such tedious work twice a day, as the little book recommends for giving the best results. I soon hit on a wooden key to fit the winding-stem, and it works to a charm. I can wind up now in 10 seconds, and I wind only once in 24 hours at that! If the spring ever weakens enough to interfere with correct time-keeping, I shall then wind the watch twice a day.



The key looks like this sketch. Any one handy with a penknife can make one in a few minutes The length of the crank, or "half-stroke," is about ⅜ of an inch; for careless people it should be less (as that length gives abundant power), to prevent danger from breaking the stop-work. The thickness of the wood should be about ⅛ of an inch. I prefer hickory, but any hard wood will do. For the handle, I use a ⅜ in. wire nail, driving in till the length suits my thumb and fore-finger; then I cut off the surplus end of the nail, and file smooth. The length I prefer is ½ inch above the wood. I suggest that you try one of these "keys" for your personal use, and let me know how you like them. They can be carried in the vest pocket safely. There is no patent on them that I am aware of. The idea is original with me. After a little practice you can tell to a grain's weight when your watch is nearly wound up without letting the stop-work "fetch up all standing." Previous to this practice, you can count the revolutions (about 110 to 125 after the watch has run 24 hours.) The keyhole should be make tapering, so that the key fits snugly and no more. If made too tight, it may strain the spindle on which the cap rests. If you consider it a good thing, let the people know it. I have had my watch vary as little as 2 minutes a week for several weeks in succession.

New York City, May 4, 1881. ZOPHAR MILLS, JR.

Thanks, friend M. I do not think the springs will ever weaken, for they are made of the best tempered steel, and are, for aught I know, equal to the springs put in the most expensive watches. I hardly think I should care for your crank for my own personal use, as I always wind my watch when taking it from my pocket, to look at the time. I have learned to do this "automatically," and therefore I have a watch that is always wound. In fact, it is the first watch I ever carried that did not annoy me by running down. Our girls who make a business of winding the watches daily to regulate them, use a pine stick, about a foot long or more, and by laying the winding pendant on the edge of the table, and moving the stick lengthwise over it, as the watch is also moved along, they are "spun up," as it were in a twinkling. As the Waterbury Company are proverbial for making wonderfully ingenious devices for a very small amount of money, perhaps they will get out some little "cranks" for about a nickel apiece. I will send them this. These watches are coming into general use at a wonderful rate.

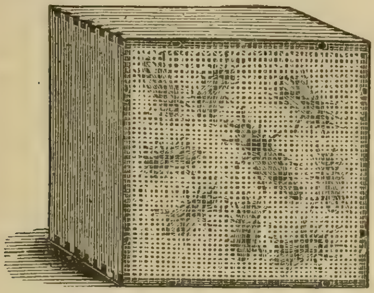
THE NEW INDUSTRY; WORK FOR BEE-KEEPERS.

THE GREAT CALL FOR BEES BY THE POUND.

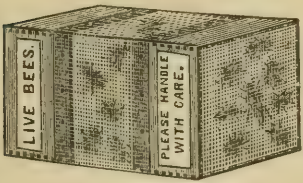
OWING to the great demand for bees to fill the empty hives consequent upon the great losses all over our land during the past winter, I am reluctantly obliged to say that our prices for bees by the pound, during the months of May and June for *this year* will still be the same as April prices; viz., $2.00 per lb. I shall be very glad indeed to have others take this trade, and relieve me sufficiently so that I may commence at once to prepare my bees for the coming winter. Of course, you know it looks bad for an editor of a bee journal, and a teacher of bee culture, to fail in wintering as I did last winter. Were it not for this latter point, I might sell off all my bees by the pound, and buy more in the spring, and thus avoid wintering; but how then should I teach my great A B C class? To induce others to come to the rescue of the many wanting bees, I will give the names, free, of responsible parties who will furnish bees at these, or less prices. There is little or no trouble with queens, as these can be procured cheaply in any quantities, while bees can be shipped long distances only at a considerable expense. It will pay exceedingly well to raise bees by the pound, even when we depend on feeding during the seasons they get little or no honey.

CAGES FOR SHIPPING BEES.

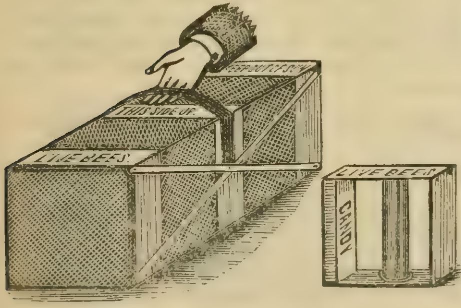
Bees must of a necessity be sent by express; none are allowed by mail except the dozen or two that accompany the queen, and freight is altogether too slow.



CAGE FOR $\frac{1}{8}$ LB. OF BEES.


LIVE BEES.
PLEASE HANDLE WITH CARE.

CAGE FOR $\frac{1}{2}$ LB. OF BEES.



CAGE FOR 1 LB. OF BEES.

PRICE LIST.

3	⅛ lb , single section, no candy	05
6	½ lb , 2 sections, no candy	10
9	1 lb , 3 sections, no candy	15

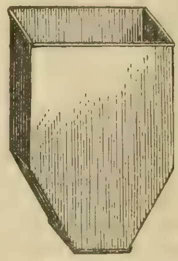
If filled with Viallon's candy, add 3c to each section, and if wanted by mail, 3c more to each section.

2	Tin water-bottles, for long shipments	03

We put in from one to three of these bottles, according to distance and quantity of bees. When distance is such that they will likely be received in 3 or 4 days, no water is needed; and it may be we shall succeed in getting them to stand a week without water. The smallest cage is an excellent one for sending a valuable queen in by express.

MATERIALS IN THE FLAT, PER HUNDRED.

$1 50	Sections, printed as per cut, in price list	$ 75
50	Wire-cloth caps for ends.	2 00
1 00	" " bands to match them	3 00
20	Strips to hold candy, per 100.	25
10	Handles of fancy colored book-binder's cloth for 3-lb. package	50
2 00	Water bottles	2 50



45	Tin tunnel, for shaking the bees into the above cages	50
2	Yucca brushes	65

With the above tunnel, an expert will put up a pound of bees ready for shipment, in five minutes, after finding the queen. After using the tunnel a dozen times or so, the honey that shakes against the inside should be washed off, and also the yucca brush that is used to brush them down. When the tunnel is dropped, it should be set with its mouth on the ground, and the small end covered with the small cap, to keep robber bees from sucking up the new honey. The cages may hold more bees than the weight named, especially in cool weather; in fact, we often put 1½ lbs. in a 1-lb. cage; but if the weather is hot, it is not safe to put in more than 1 lb.

◆

VIALLON'S CANDY.

AND SOME OTHER MATTERS PERTAINING TO SELLING BEES BY THE POUND.

WITHIN the past few days we have been sending to every one South whom we thought might have queens, to see if they could not help us supply the enormous demand. Here is a letter from friend Viallon, in regard to this and kindred matters.

Yours at hand, and in reply would state that I have too many orders to spare you any dollar queens at once. I may in a few days if orders slack a little. I am making some experiments on shipping bees by the pound, and so far I think I shall succeed in sending them to any part of the country without loss. I had never given this matter any attention since 1879, when I sent you some; but as the demand is so large, and as it is of mutual interest, I have undertaken the experiments. So far as I have gone, I would state to you that it requires a box or cage not smaller than 6 inches square for 1 lb. of bees, and that 1 lb of candy will hardly do for more than 5 days. Those I have in cages have consumed, on an average, 4 ounces in 24 hours. These were taken and put in the cages without allowing them to fill themselves with honey. Now, here is another question: In sending bees by the pound, must we allow them to fill up with honey before putting them in the cage, or must we put them in on an *empty stomach?* Do you know that it makes a big difference in favor of the one selling bees, etc.? This is a question to be decided, as it may end in serious difficulties. Suppose I send you 10 lbs. of bees, and when you receive them they weigh only 8 lbs., though none died in the boxes, and they were weighed here correctly? Now, I went to-day, since the idea struck me, and gave a smoking to a colony, and after I thought they had filled themselves, I introduced 1 lb. into a box, similar in size to another filled with bees taken without being filled up, and really there is a marked difference in the size of the bunches. It looks to me as if it were more than one-fourth. I wish you would answer the above.

Do you know that I am proud of my candy? I have not only mailed all my queens without loss, but also the bees accompanying them — over 200 mailed to date. There will be more dollars saved in mailing queens with my candy than with the Peet cages, as nearly any cage will do to mail queens, but not any candy. Yourself will save more dollars in using the candy than you will probably make in selling Carlin's fdn. cutter, Peet's cages, etc., to whom you have paid to use their inventions. I inclose some of the last postals received; they all are nearly the same. P. L. VIALLON.

Bayou Goula, La., May 13, 1881.

Below, we give the cards to which he refers: —

Queen received all right—not a bee dead. Please accept thanks. P. ELBERT NOSTRAND.

550 Bushwick Ave., Brooklyn, N. Y., April 5, 1881.

The bees arrived in very good condition—not a dead bee in the cage. P. STEPHENS STENGER.

St. Meinrad, Spencer Co., Ind., April 26, 1881.

Queen received on the 30th, tiptop order, without a dead bee. Please let me know at what price you can furnish me 1½ or 2 lbs. of bees, with dollar queen, and how soon could you furnish them?

Decatur, Ill. J. C. HENDRICKS.

The queens arrived at 7 P. M. last evening, in splendid condition, not a single dead bee in the whole.

Lyons Farms, N. J., May 6, 1881. WM. GUNNMAN.

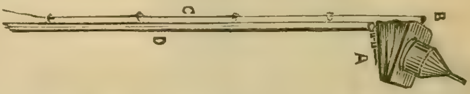
You touch on an important matter, friend V., when you speak of the extra weight of bees when filled with honey; and as we are selling bees at $2.00, instead of $1.25, the list price this month, I presume our customers will have a right to complain if they get a cage of bees weighing less than 1 lb. We have never taken any pains to make them fill themselves, but I have noticed that bees put up during a heavy honey yield are always full any way, and that they always ship better at such times. If we send them with candy and no water, I should think it much safer to make them fill themselves with thin honey before starting. As you state it, we should therefore put up 1¼ lbs. to be sure and have them hold out. I have before mentioned that bees will rapidly shrink in weight, in any case, and those who buy bees by the pound, to sell again in the same way, will have to allow a pretty wide margin for profits. Much will depend upon the honesty of the one who sends them out; and as with the dollar queens, he who sends the most satisfactory equivalent for money received, will probably build up the greatest business. No one of our customers has ever complained of short weight that I know of.

Now about the invention of the honey candy. If you will turn to page 215, July GLEANINGS for 1878, you will find there that I had been for some time experimenting on a honey candy almost exactly like yours, only I used but one grade of sugar in its composition. The soft sticky candy that our friend M. T. Rowe there complained of, carried queens in beautiful order; and so much pleased was I with it, that I gave directions in the A B C for using honey with the candy for queen-cages. Our friends who have the early copies of the A B C will find it there given. After a few months, our queens began to die again, and I tried pure coffee sugar, with vials of water, with what seemed such a marked improvement, that I discarded the honey. Water worked beautifully awhile, and then again it didn't work, and with much foreboding I went back to your honey candy again, friend V. As we have lost several valuable queens with it this summer already, I do not know but that I shall have to get you to make the candy for us, and if you will guarantee all our queens to go through alive, I will willingly pay you $100.00 for the invention. It just now occurs to me, that friend V. did not write his letter for publication. but it is a matter of such general interest, I think he will excuse it. In regard to the bees consuming a pound of candy in 5 days, are you sure they did not crumble down a great portion of it, and allow it to sift out of the cage? This has been one great trouble we have had with all our candy, but I think the honey candy is less liable to this objection.

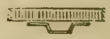
A DEVICE TO GO WITH THE SWARMING-BOX.

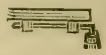
MAKING BEES GO INTO THE SWARMING-BOX WITH SMOKE.

As swarming time has begun, I will try to tell you how I got swarms into the box last year. Get a pole 15 or 20 ft. long, and put screw eyes in it at intervals of about 4 ft., and at the top end a bit of iron, or fold tin thus:



Now put two tin staples on the under board of the smoker bellows thus, to slip the bent iron on the end of the pole into, thus: also put an eye in the end of the upper board of the smoker-hook, a cord in this eye, and pass it through the eyes on the pole, and by pulling the end of the cord you can stand on the ground and smoke a swarm into the box without any difficulty.





A. T. MCILWAIN.

Abbeville C. H., S. C., April 19, 1881.

Quite an idea, friend M., for, if I get it correctly, with this arrangement you compel the bees to "get out" of whatever cavity or inaccessible place they may try to cluster in, and go into the swarming-box, and that, too, without waiting for any slow movements they may think proper to make.

I presume a smoker that would light quickly, and not go out when it was away up on the top of that pole, would be a desideratum. Eh?

SENDING SEEDLING HONEY-PLANTS BY MAIL.

I SEE in May GLEANINGS, p. 255, you speak of the immense quantity of Simpson seedlings, and want to know how to ship them. I have sent plants to acquaintances nearly to California, and can do it again. For long distances you need swamp or bog moss to pack in; but for short distances, soft wet paper will do; if not more than two or three days' transit, I prefer paper.

Preparation: Select plants large enough to handle carefully and handily. Soak the soil well, then lift them with a trowel in clumps, and throw them down hard enough to break up the soil; pick out your plants and wash them clean from dirt on the roots, being sure to wet them all over. They are now ready to lay in rows, the roots all one way, and are all ready to pack. Lay down a row 4 or 5 plants thick; now lay another one, the roots overlapping the roots of the first one (this makes one length of roots for two of tops;) cut a strip of paper about an inch wider than the two lengths of plants; soak it with water; lay your plants on and roll them up tightly, and tie three strings around them to keep them together. The paper should go about three times around the bunch. Now with ⅓ turpentine and ⅔ linseed oil, smear over some soft paper, then do up the bundle; put on an outside wrapper to address; tie up, and shove it on the road. They will keep fresh three or four days if done up rightly. The oiled paper must cover all over tight. To use swamp moss, put a thin layer on the wet paper, and do up the same. When unpacked, simply dip the plants in water all over, and let lie an hour or two, if they are wilted any. If this is not quite plain, I will try shipping you something; or, if you are afraid, try sending me a package of the Simpson plants, and I will tell you where you are wrong in putting them up. I have tried these plans for over ten years, and I will risk either of them. You may try sending me 100 or 50 if you want to risk ever getting your pay.

H. C. JEFFREY,

Woodbury, Conn., May 13, 1881.

Many thanks, friend J.; and as to pay, I think it will be due the other way, even after we send you all the plants you want. It seems a little queer to me, that you advise shaking all the dirt off; we have always been very careful to leave some of it adhering to the roots; but as nurserymen usually adopt your plan, I presume it must be the best one. One point in its favor is, that you have to pay postage only on what it actually valuable.

GALLUP ON QUEEN-REARING.

I AM going to give my ideas on queen-raising for what they are worth. In the first place, I think that no one will deny that some queens are far ahead of others in prolificness, and that some swarms are far ahead of others in productiveness. Now, I know that we *can* bring an entire apiary up to a good standard of productiveness by careful and judicious selections and proper breeding; and furthermore, any bee-keeper who breeds in and in for a series of seasons will find his bees running out. Many beginners think that if they get queen-cells built (no matter under what circumstances or conditions), that one is just as good as another. This is an erroneous notion. The late Adam Grimm became fully satisfied that his stock of bees at one time were running out and growing weaker, simply from breeding in and in too long without a change; and while I am about it, I will quote Mr. Grimm still further. He says, "Queen-breeders, as well as other bee-keepers, should save all the cells that are built in stocks, that voluntarily swarm. In this way they will get queens that are reared as such from the egg. It is my experience, that queens of that kind are more durable and more prolific than queens reared from larvæ a number of days old. If queens have to be reared under compulsion, the cells for them should be built in strong colonies, and not be removed until they have been about 6 days sealed. Such queens are, with few exceptions, as good as the best." So much for Mr. Grimm, and you will find that he is correct.

Now, to raise good queens, we must have all the necessary conditions; and what are those conditions? A full stock of bees. They must be gathering forage abundantly, or they must be supplied daily with diluted honey or sugar syrup, and they must have eggs and larvæ just hatched; for if they have larvæ several days old they will be apt, in their hurry, to start queen-cells over larvæ too far advanced. It is an ascertained fact, that bees can change a larva to a queen after it has been fed as a worker, up to the fifth day; and it is another fact, that such queens are short-lived, and, in one sense, worthless. A full stock of bees consists of all the classes. As to age, we must have young bees for the nurses, and old bees for the water-carriers, honey-gatherers, and pollen-gatherers. If we make up a stock and place it on a new stand, all the old bees will go back to the old stands, and then we must see that they have pollen and honey, and we must supply them with water until they can gather for themselves. Three cards of comb, bees, pollen, and honey, with a close-fitting division-board, is a good stock to all intents and purposes; but they must be crowded with bees. Now, if queens are raised under the proper conditions and from good prolific stock, they are just as good if we charge only one dollar for them as they would be if we charged ten; and if they were not raised from good stock, and under the proper conditions, our charging ten dollars would not make them good ones. Every bee-keeper should keep introducing new stock into his apiary from year to year, so as to avoid in-and-in breeding, or he can not expect to keep his stock up to the standard. E. GALLUP.

Santa Paula, Cal., May 4, 1881.

GRAPE SUGAR FOR WINTERING.

HAD you not too much grape sugar in your combs for winter feed? I had one colony which seemed to have died on it. I have heard of disastrous results elsewhere in consequence. Please examine fairly, and report without prejudice. The worst aspect of the manufacture of grape sugar is, that it is not openly advertised and sold for any legitimate useful purpose, unless it is for feeding bees, thus making a *prima-facie* case of fraudulent intent. My use of it has not resulted unfortunately, except in the above case; but I am not certain there is any economy in its use. J. H. Peirce.

Dayton, O., May 3, 1881.

It has been reported to me by several bee-keepers of reputation that the immediate cause of your winter losses was feeding glucose or grape sugar. Please give us the facts in the case; to what extent you have fed glucose, if at all. H. R. Boardman.

East Townsend, Huron Co., O., May 14, 1881.

Many thanks, friends, for your kind inquiries. You are both, perhaps, well aware that I have never advised the use of grape sugar for wintering, and that I have, in all my circulars and price lists, cautioned you all against its use, on account of its hardening in the cells. The first experiment I ever made with it, for wintering, caused the death of two colonies, which I duly reported in these pages. They did not have dysentery, but simply starved on heavy combs of solid grape sugar. After our experiments with candy made of grape sugar, coffee sugar, and flour, I used it experimentally on several colonies to start brood-rearing, at different times during the winter of 1879-'80. It started brood promptly, and did no harm, as I then reported. During this past winter, the weather was so cold that no such experiments were made at all; all feeding was done up before cold weather. I reported last fall just how we fed those colonies needing stores. It was candy put into frames, made of 3 parts best granulated sugar, to one part of grape sugar. A great part of this remains in the frames yet, not being used nor needed by the bees. It may be urged, that the bees got grape sugar from all the hives, from open-air feeding. This is a mistake, for we did no open-air feeding last season at all, on account of an apiary recently started right across the street from us. An examination of the combs shows that the bees did just the same on stores of honey as they did where they had the frames of candy. One colony that had dysentery especially bad was fed up on maple sugar. As an experiment, I fed one up exclusively, early in the fall, on pure grape sugar of the improved Buffalo make, called the crystal sugar. The bees ate this with greater avidity than the old kind, and I thought it might be less apt to harden in the cells. This colony was considered among our best early in April. Had our usual April weather come on, we should probably have saved about 50 colonies that were lost.

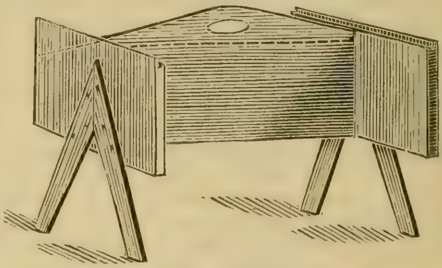
A few winters ago, neighbor Blakeslee had his first spring dwindling, and lost the greater part of his apiary. As he had used some grape sugar during the fall before, he declared it was the cause of his losses, and denounced it most strongly. A few days after, he visited Mr. Pierson, of Ghent, an old veteran who had wintered successfully for years without loss. Mr. P. had had a terrible time with the dwindling, and had lost almost his entire apiaries, but had never fed a pound of grape sugar in his life. Neighbor B. told us this with a smile, and confessed he had been hasty. If the losses of the past winter were only among those who used grape sugar, it would very likely never be used any more.

The case Mr. Langstroth mentions in the *A. B. J.* of May 11th, seems to show very conclusively that grape sugar should not be used for winter stores, and I can not see why our friend McCord should have done so foolish a thing as to have given the greater part of the stores of 36 colonies a feed mostly grape sugar. Although I have never known a good article to produce dysentery, I should have certainly supposed it would have hardened in the cells so as to starve them. Perhaps friend M. can tell us some thing more about it. I am verry sorry that grape sugar is used for bad or dishonest purposes; but even if it is, I can not see why this should be a reason why we should not use it to feed bees while rearing queens, and bees by the pound. The concluding remark of friend Peirce, that it may be no economy, is the great point at issue, and friend P. should know some thing about it, for we have sold him at least one barrel of the best Buffalo. Our business is principally raising bees by the pound, and now bids fair to be for years to come, unless somebody turns in to help; and for this purpose I think grape sugar a great boon.

I would suggest to friend Boardman, that glucose don't mean grape sugar, as he will discover by ordering a sample of both of the articles from the factory.

McILWAIN'S COMB-HOLDER.

We have had almost as many comb-holders as queen-cages; but the one below is so easily made, it may prove a useful suggestion to some of the friends.



COMB-HOLDER.

Here is a picture of my comb-holder, which describes itself. I have put a box with sloping cover, as shown by the dotted lines, on the other side of holder, to keep smoker and fuel in.

Abbeville, S. C. A. T. McIlwain.

But, friend M., I am afraid if your bees robbed as badly as ours do this 24th day of May, you would want some kind of a cover over it, or some thing like our comb-bucket. The boys do not even dare to carry a lot of frames of candy around to colonies needing supplies now, unless they use a comb-basket.

Friend Heddon, in his report on page 273, don't tell us how the 50 colonies he sold turned out. Neighbor Dean has just been in with a load of bees, and he says he lost 6 colonies *in May*, by the "dwindling," and that, too, after he had counted them as all right. I want to see these old veterans all own up *fairly* and *squarely* just how helpless they are in the matter.

FRIEND COOK'S TALK TO THE BLASTED HOPERS.

IS IT TRUE, THAT "IN GOD WE TRUST"?

As the mortality among bees seems to be of huge proportions in a vast number of localities, and as the wails of mourning arise from those who have lost, by disease or otherwise, a large portion of their bees, I am constrained to give a few very consoling thoughts upon our apparently very great loss as follows:—

Job said, when his cattle, children, etc., were taken from him, "The Lord gave, and the Lord hath taken away; blessed be the name of the Lord." Let us ever be thankful in adversity as well as in prosperity. But there is a class of individuals who are never thankful, either in prosperity or adversity; in the former, they are negligent and wantonly careless; in the latter, they of course see nothing to be thankful for. I have given my report for 1880; now I will give my report for the winter.

I put 11 stocks of bees (all I had) into winter-quarters on summer stands; packed in fine hay, or what we call "nimberwill," a fine grass that grows on shady ground; but, alas! they have gone to the next world, where sickness and death never come. There is, to my knowledge, only 3 living stands in this township, out of about 100, and all round, as far as I have heard, it is the same. From reports in GLEANINGS, can there be any thing found to be truly thankful for? Can we find thankfulness in our hearts wherewith to be thankful for the circumstances we are now found in? Our bees are gone, never to return, and some of us may be left without the wherewith to replenish our empty hives. Is there any thing here to be thankful for? It does seem as though things look very dark and discouraging, and as though the bright side had become dark also; but there seems to be nothing that has only one side to it. There surely are two sides to every thing, and almost invariably one side is much darker than the other. There are two sides to the subject of our losses, and I have briefly penned the dark side, and now let us look at the bright side.

There is much for us to be truly thankful for. We can thank God that circumstances are as well with us as they are, for they might have been a great deal worse. The question might arise, "What could be worse?" My friends, God could have taken *us* away just as easily as he did the *bees*; and if he had done so, without our being in a saved condition, it would have been utter and everlasting ruin. This would have been worse, would it not? We may well thank our Creator for life, health, and strength, by which we can build up our seemingly ruined fortunes; and with the supply of hives and broad sheets of honey-comb left us by our all-wise and divine Protector, for which we should be very thankful, we can soon build up our apiaries as good as they were; yea, I believe better, if we, as agents, do our whole duty. We should not grumble at all if the hives *are* dirty, and the once beautiful frames and regular combs all covered with dead bees, and dripping from the effects of a terrible (or, rather, *filthy*) disease; but we should rejoice and be glad, and give thanks to God that we have them even as they are. We should be thankful for the knowledge we have gained and skill acquired by our past experience with bees, and for the many very happy hours we have passed in our bee-yards. These things we can not very well lose unless we go insane; which would be a terrible experience, worse than the loss of our pets (another point in favor of thankfulness.)

I will give an illustration showing what we should do. We will suppose the father of a family of children purposes building a dwelling-house for himself and family; will suppose this to be a frame house, and for the inside work he purchases a few hundred lath. Now, these lath will be found to suit the children's fancy for nice playthings; and, in great glee, having the house-building fever, will proceed to form all kinds of houses, porches, piazzas, cupolas, towers, etc., and enjoy life splendidly. Now, when the father informs the children that he is ready to use the lath, and proceeds to gather up the scattered ones, the children will, in all probability, unless exceptionally good children, set up a protesting cry against such proceedings on the part of the father, and will continue, until convinced that the lath must go to be a part of a structure built for their comfort and convenience; but when they put their trust in their father, believing him to know what is best for them, the cry will cease, and a general round of satisfaction will be experienced. Now, in comparing the lath to the bees, the children to the bee-keepers, and the father to our heavenly Father, we have it. Whether the bees go toward building us a heavenly habitation is not a matter of dispute; they are gone, and our heavenly Parent took them, and let us abide by his decision, firmly believing that he knows best. He built this world and all there is in it, and it belongs to him, and let us say amen to all his works. Let us profit by past experience, and if we see in it any part of our duty undone, let us in future do that part, and do it well, not only in bee-keeping, but in our every-day labor. I am not in Blasted Hopes yet. I still hope on and trust.

Trust in the Lord, and do good; so shalt thou dwell in the land, and verily thou shalt be fed.—Ps. 37:3. T. J. COOK.

Newpoint, Ind., March 14, 1881.

May the Lord bless you for your kind words, friend Cook! They have done me good already, and I am sure many a heart will thank you for your excellent illustration of the lath houses.

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TOUGHNESS AND ENDURANCE FOR STANDING THE WINTER.

ANOTHER REASON FOR OUR LOSSES IN WINTERING.

Why all this talk about wintering, when it simply resolves itself down to these facts?

1. We must have bees with vitality enough to withstand the long cold winters, which we can get by procuring our bees from any source where they have swarmed naturally for a few years, and in raising our queens and drones we must let them swarm themselves, or raise queens artificially as good, which can only be done by queen-breeders of long experience.

2. We must see that they have good stores, not grape, apple, peach, cane, or any other juice or honey-dew that has so much substance in it that, in getting the necessary honey to keep them warm, they get filled up with feces, which they retain until they get a chance to fly, thus giving them what is called dysentery. Now I modestly claim that I can prove to your and friend Doolittle's minds why they winter so poorly, after you both gave it up (see GLEANINGS, Feb., 1881, p. 68.) The main cause of bees wintering so poorly in long cold winters is;

that they are not tough. They have not the necessary strength to carry them through, but they would have had if they had been allowed to swarm naturally. But the stock must be of the right stripe to commence with, not queens that have been raised by dividing, neither from queens that have been raised from queens that were raised in superseding old worn-out ones. In fact, from queens found in this country, Italy, Cyprus, and Palestine, where they swarm naturally, and are far enough from bee-keepers that are dividing and raising by the quantity and not for quality. We can also get good stock from a few queen-raisers. The proof of good stock is in their wintering. If you look around the country, you will find men with bees in common hives, kept in the same place for 40 or 50 years, that have wintered them without any great loss, for that length of time. (See H. Alley, *A. B. J.*, Feb. 9, 1881, p. 42; see GLEANINGS for Feb., 1881, p. 84, J. C. Phillips.) After awhile some neighbor gets an idea of keeping bees according to the latest scientific ideas. The *ideas* are nearly all of them right, but he does not know how to apply them properly; gets a few swarms, transfers to a convenient hive, so he can *divide* them and build up a large apiary very quickly. So he divides every year until he gets a large quantity of them; but what is the matter? His bees at first wintered as well as his neighbors' in common hives, without any extra care; but in three or four years he begins to lose a good many, and he anxiously studies up the wintering question, tries chaff, cellar, etc., and gets along moderately well until, in eight or ten years, more or less, after commencing, there comes an exceptionally cold long winter, and away go his and his neighbors' bees — his neighbors' bees spoiled by drones from his poor, divided queens. Then they report to all the journals that common gums are no better than a frame hive. Why should they be? it is not the hive that makes the bees tough; any one can find (where far enough away from any of these dividing men) bees that have wintered well this season in common hives without extra care. We can find plenty of such reports in the back numbers of the journals, where beginners have lost all their bees after a few years of dividing.

The surest way for any one to get good queens is to raise them from his best stock, naturally, being sure to mark all cells that are started before they swarm, for they are always started from the egg, and when they are matured, make nuclei, giving each a cell. In that way he can raise bees that will winter well in common hives, but better in chaff ones. Need not be carried in and out of cellars, but you must see that they have good stores. My bee-keeping friends, it is not the cold, for they live as far north as civilized man. It is not the time they are kept from having a fly, for they are kept confined 5 or 6 months in different places, but because they have lost that toughness which they had when they came from their Creator. If you will take this view of it you will see that it is not strange that, of two hives side by side, one should winter well and the other should die out. One had a good queen, and the other a poor one. S. S. BUTLER, M. D.

Los Gatos, Cal., April 25, 1881.

There may be truth in what you urge, friend B.; but, if you are entirely right, why do not common bees, with the old style of management, winter better? Our country is almost rid of common bees this spring. Again, why does L. C. Root always succeed with his cellar, and always get a good crop of honey? Why did my neighbors succeed during the past winter? Neighbor H. got all his bees from queens that I imported, and the stock was precisely the same as mine. I am inclined to go back to proper care, rather than to natural swarming, etc.

SOME HINTS IN REGARD TO MAKING REPORTS, ETC.

FRIEND ROOT:—You will not fail to get all the reports for Blasted Hopes you need to publish for a year to come, and as many Reports Discouraging that, if all were published, your A B C class would conclude that money invested in apiculture is very liable to "take to itself wings and fly away;" but after all said that can be said, perhaps there are as many who succeed in honey-raising as there are in any other business made a specialty. Heddon has set an example in his report published in *Bee-Keeper's Guide* for April, that I would like to see followed; that is, stating the proportion of capital invested in bees. Now, can not you persuade all who report for 1881 to report the proportion of capital invested in bees, or the occupation in connection with which bee-keeping is carried on?

For myself, the report for 1880 runs thus: May 1, 38 colonies; increase by artificial swarming, 3; natural swarms, 15; surplus, 900 lbs.; 600 in 1-lb. sections; remainder extracted. Capital all in the business; had the rheumatism so that the fore part of the season they were half cared for; the latter part of the season hardly cared for at all. One was robbed in the fall; 23 died up to date; hope to have 30 left the first of May. To-day, Apr. 20, the first pollen is being carried in; Apr. 14, snow was four inches deep.

The following I copy from my memorandum:—

APRIL.	COLS. OF BEES.		OCCUPATION.
	FALL.	SPRING.	
John Fleming,	35	5	Blacksmith
M. Fleming,	14	5	Blacksmith.
O. Miller,	13	1	Farmer and Bl'smith.
Mr. Hollenbery,	12	0	Blacksmith.
J. Cheever,	9	0	Capitalist
W. Tiffany,	45	6	Hotel and Farmer.
Dr. Mead,	13	0	Physician.
E. Reynolds,	16	12	Farmer.
P. Brewer,	13	7	Farmer.
F. Vanpelt,	1	1	Farmer.
H. Scranton,	55	32	Apiarian.

Most of the above use American hives. Vanpelt has a Root chaff hive filled in with sawdust. His one hive gave 100 lbs. surplus, no increase. Scranton had 50 chaff hives; there are no other chaff hives in town. There are six more I would like to hear from who had quite a lot last fall. One is a box-hive man who will not sell a swarm of bees for fear of "selling his luck." If he hasn't lost any I will report as soon as I hear. H. SCRANTON.

Dundee, Mich., Apr. 20, 1881.

HOW TO GET SUBSCRIBERS FOR A BEE JOURNAL.

A BOYS ONE-DAY'S EXPERIENCE.

I WILL have to write you my experience in trying to secure subscriptions for GLEANINGS. Being induced by your advertisement in price list to obtain the Waterbury watch by procuring the requisite number of subscribers, I started out on Monday last to visit neighbor bee-keepers. The first place I stopped at was friend Snodgrass'. Having lent him a book some time ago I felt quite sure of obtaining his name to my list; but after talking with him in regard to the book and bees for an hour, he positively refused me his signature. In conversing with him I found he entertained the idea that the queen leaves the hive every afternoon for a fly, and also that she meets the drone at very short intervals. He also stated he had 10 or 12 colonies last fall in American hives; had succeeded in wintering but two. In reply to my question what he would do if he had a queenless colony, he said, "Let them slide." In short, he knew nothing about bee culture. His reason for not subscribing, "too expensive."

The next place I tied my horse was at J. Winkleman's, an old bee-keeper, but I had no better success than before. He said he had but 5 stands left out of 15 in American hives; was going to make his own hives hereafter out of straw: "that's the way they do in the Old Country."

The next man I tried to persuade to subscribe was Mr. Adams. He had no time to read bee books; was keeping bees to get a little honey to eat; had wintered through 7 out of 19 in American hives; so, bidding him good-day, I again started on; but here my intended route was changed, on account of high water. So, turning my horse from the river, I soon reined up at Mr. Thorp's. His son was out of doors making soap, so I told him my business. He informed me his father was the bee-man, and went into the house to inform him of my presence and business. He came out, telling me that his father did not want any bee journals. He also stated that their hive for the future would be hollow logs; had wintered 4 out of 5 in boxes and logs, and, as I was not invited into the house, I again started on, this time to rein up at Mr. Rens. Allen's. From the tidy appearance of things I was quite sure of success; but, alas! I was disappointed, his garden and poultry business taking all his time. He had lost 2 stands out of 7 in Langstroth hives, and so, bidding him good-day in the best of humor, I started for home. Reached there at 5 o'clock, tired and hungry. I advised them all to meditate the same as the man did in GLEANINGS; thought that was the best advice I could give. WILKINS C. PERKINS.

Jefferson, Greene Co., Iowa, May 2, 1881.

I am very glad, friend P., to get just such a letter from practical experience. In fact, it is just about what I expected it would be, especially after such a year as the past one. Now, the point is, were these friends you called upon far in the wrong? While I think they may make a mistake in not taking a bee journal at all, or taking any pains to keep posted, I think they have a perfect right to decline, if they choose; and, to go a little further, I do not know but that I should say they were wise in deciding not to subscribe under the circumstances. If you will excuse me, my young friend, may I suggest that the hopes of getting a watch was perhaps your principal inspiring motive when you started out. This is right enough; and, in fact, the circulation of many of our papers comes from clubs secured in just this way, but for all that I do not like it. I would far rather have a small subscription list that came from those who take GLEANINGS just because of the intrinsic value of the paper itself, rather than because of the things given along with it, or for inducing people to work for subscribers. Shall I tell you what I think the best way to get up a club in your neighborhood? Just this: Stick to your work of caring for your bees, and quietly build up an apiary, and in a very little time people will begin to run after you instead of your running after them and urging them to subscribe. If you, my friend, will build up a nice, neat apiary, and secure, say one ton of nice honey in attractive shape, I would not be surprised if every one of those you have called on would pay you a visit in less than a year, and ask of you, as a favor, that you take their money and send for a bee journal. It is deeds, not words, the people want, to convince them of the truth of any theory, and the people are right. If you make a failure of bee culture, and land in Blasted Hopes, and they should be induced to follow suit by subscribing, it is better for them not to subscribe. GLEANINGS has a better subscription list than I expected it would have, and I fear better than it deserves. The way I have pointed out to get names requires earnest, faithful, hard work, not with your neighbors, but with yourself; but the victory, when it comes, is worth all the work, and it comes right in the line with the text,—

> He that overcometh, and keepeth my works unto the end, to him will I give power over the nations.
> —REV. 2 : 26.

When you become a successful bee-keeper *yourself*, you will have power and influence among your neighbors that can never be attained in any other way. The quiet, steady worker, is also the happy man. Am I not right, boys?

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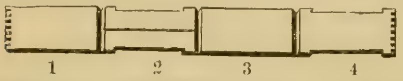
ABOUT SECTIONS, PUTTING IN STARTERS, ETC., FROM DR. C. C. MILLER.

PARKER'S FOUNDATION FASTENER.

IN using this fastener, my greatest trouble was in the wax sticking to it. After daubing some honey on the fastener, it would do nicely for a very few times, and then I had to stop and take a good deal of time daubing on more honey. After some experimenting I settled on this plan: After securing the fastener on the table or bench, take a strip of cotton flannel a couple of inches wide and 8 or 10 inches long, and fold it in two or three thicknesses so it shall be an inch wide or less. A little strip of wood is on each fastener to serve as a stop to make the section stop at the right place when put on the fastener. Let the strip of cotton flannel be stretched across the fastener, right back of this little stop, and tack each end down to the bench or table. Have some honey in a smallest-sized sauce-dish or butter-dish, and in it a little swab, made by tying some cotton flannel on the end of a stick. Swab the flannel on the fastener till it is well saturated *Each* time, immediately *after* fastening in a piece of fdn., draw back the lever and let the end be pressed down into the honeyed flannel; then it is always lubricated just in nice shape for the next operation. If the foundation is too cold it will not work, and a good plan is to let a pile of the pieces of fdn. lie where the heat from a stove will make one edge quite soft, taking care not to melt it. Do not try to flatten down too large a surface of fdn. on the section; the smaller bite you can get with the lever the firmer it will hold. Press down the lever on the edge of the fdn.; push up the fdn. so it will hang horizontally when the section is on the hive, then with a hard pressure slide back the lever off the fdn. Those who use only starters in sections may not care for these instructions; but beginners who fill the sections with fdn., and are annoyed by its falling out, will be glad of any suggestions. Indeed, I am writing particularly for beginners; so I will tell them

HOW TO PUT TOGETHER ALL-IN-ONE-PIECE SECTIONS.

Lay the sections in flat before you on the table, with the grooved side uppermost and the narrow or top end at your left. For convenience, we will number the four parts of the section beginning at the left, 1, 2, 3, and 4.



Pick up the section with the right hand; with the thumb of the left hand upon 2, press the left forefinger across the under side of 1, close up to the joint, and break the joint by pressing the finger evenly the whole width of the joint, at the same time pushing the finger slightly toward the left; this will break the joint at the right place, so that the top piece, or 1, will go between the side-pieces 2 and 4. Then with the thumb of the left hand on 2, the thumb of the right hand on 4, and the ends of the fingers of each hand under 3, by pressing the thumbs and ends of the fingers, start these two joints to breaking, then grasp firmly 2 in the left hand and 4 in the right, and with 3 on the table raise 2 and 4 to an upright position, pressing them hard on the table at the same time with a wiggling motion to and from you. This wiggling motion will make the joints much less liable to break entirely apart. Then bring down 1, and crowd the dovetailed ends together, and the section is complete, unless you may think best to hammer together lightly. Talking of these all-in-one-piece sections reminds me how much

BEE-KEEPERS NEED CHARITY FOR EACH OTHER.

These all-in-one-piece sections are so generally liked, that it seems a foregone conclusion that they are *the* sections, and yet I must confess I don't like them so well as the dovetailed. Now, it will not do for me to call every one a fool who likes the new sections best, for that would be very much like saying all bee-keepers but myself are fools; neither would I like to have the entire fraternity brand me as a fool because I prefer the dovetailed. And yet, in our talk and in our writings, many of us are apt to insist, in sometimes a rather unpleasant way, that whoever differs with us is wrong. To begin with, bee-keepers, as well as other people, are pretty strong in their prejudices, and each one is apt to believe that *his* way is best. Twenty years ago I used hives with movable bottoms, and I doubt whether any amount of argument would have made me willing to dispense with what I considered the convenience of movable bottoms. Changing to the regular Langstroth hive, and buying some ready made with fixed bottoms, I have for years used no other, and it would take an immense amount of eloquence to make me submit to what I now consider the inconvenience of movable bottoms. Again, observations in different localities, and under different circumstances, may lead to very diverse conclusions. It is common to see the advice given, to beware of leaving any piece of comb lying about the apiary, for fear of its proving a nursery for moths; whilst if I wanted to keep a piece of comb secure from the moth, I scarcely know of any surer way than to throw it on the ground anywhere about the apiary. Doolittle says, "In uniting bees, alternate the frames, and thus mix the bees thoroughly, and they will never fight at any time of the year;" Novice says they *do* sometimes fight; and I have no doubt each one is telling the truth from actual experience. Let us, then, have faith in each other, and charity enough to believe that others may be honest, even if their observations *do* differ from ours, and that possibly what may be the very best practice for *us* may not be best for everybody else.

THE PRESENT OUTLOOK.

I think I shall be able to start the season with 75 colonies and a few queens, with a handful or less of bees to each. They seem to be doing well now; have an average of about three frames filled or partly filled with brood, and I think I never worked with bees more joyfully or hopefully. Isn't God good to give us such a nice world, anyhow? Tell the noon prayer-meeting I think of them often, and often pray God to bless the services. C. C. Miller.

Marengo, McHenry Co., Ill., May 3, 1881.

Many thanks, friend Miller, for your very seasonable hints. In regard to the one-piece sections compared with the dovetailed, —it would be impossible to make the latter for any thing like the price we now do the all-in-one-piece. The appearance of them when on the market, filled with honey, is, I believe, admitted by all to be greatly in favor of the one-piece. The labor of putting up, and putting in the starters, is also an immense saving. That the old style may have greater strength, is doubtless true; but nailed sections have greater solidity still. Now, why not nail the one-piece, after they are folded? We have never found it necessary, although some perhaps do. As only about one customer in a hundred, even last season, preferred the dovetailed, we have now stopped advertising them. We pay our boys 30c per thousand for putting up sections.—By all means, let us try to have more charity, not only in matters of opinion, like and dislike, but also in business and money matters too.

Juvenile Department.

I AM 11 years old, and I thought as all of the rest of the little girls were writing I would write you a few lines too. Our summer school begins next Monday. I am going to start. I did not go last winter. We had a five-months' school last winter. My pa keeps bees, and I plant flowers and every thing I can that is good for them. I like honey too. It does not hurt pa much when they sting him. It swells some when they sting ma round the mouth and eyes. It was a severe winter on bees. Pa was afraid ours would die. He is going to plant some buckwheat pretty soon.

Elizabeth M. Edgmand.

Very good, Lizzie. We send you a book, and I trust you will keep on planting honey-plants, and get to know all about plants and bees both, when you get grown up.

Whew! After I had written the above, Stella tells me she can't send you any book, because you have not told us where you live.

I sometimes scold the big bee-folks when they are so careless; but as you are only an eleven-year-old-little girl, I guess I won't this time.

I am ten years old, and I go to school. I have not got any bees myself, but pa keeps some. He lost one stand, and had about eight left. I like bees better than I do honey, and I like to watch them when they swarm. We built a kind of a house over them. The roof was just tall enough to go over the top of the hives when they were in a row. We are going to raise all the bees we can this summer. We are going to build a bee house too this summer. Pa is a carpenter, and he expects to commence on a barn in a few days. I think the cartoons and pictures of Mr. Merrybanks and his neighbor are very funny.

Birdie M. Harden.

Good Hope, McDonough Co., Ill., May 2, 1881.

Very good, Birdie. My pa used to be a carpenter too, so you see you and I are almost related to each other. I suppose you will tell us how much honey your pa gets from those eight stands.

I am a boy 13 years of age. Pa takes Gleanings. We keep bees. Ours are alive, and doing well. We wintered them in the American hives with chaft cushings over the frames. We feed them candy made of coffee A sugar. I believe I can find a swarm of bees. The Juvenile Department is getting very interesting. I think Freddie L. Craycraft is quite right by not wanting to be put with Blasted Hopers. I think those whose hopes are so easily blasted do not have much faith; and the Bible says, have faith, hope, and charity. I have a brother 10 years old. We go to Sunday-school.

Bela M. Armstrong.

Hancock, Harrison Co., Ind., April 25, 1881.

Tip-top, friend Bela, and most especially do I admire your concluding remarks. If they have faith in God and the Bible, they certainly won't have blasted hopes very long. I only wish the "chaft cushings" had worked as well with everybody else as they did at your house.

I am a boy 14 years old. My father, Mr. L. C. Seaton, keeps bees; he has 20 swarms, almost all Italian; they are coming out all right this spring. My father bought an A B C book, and he takes Gleanings. I read them all. I like the "cartoons," and, in fact, all the rest. My brother, James Dighton, received a book from you, entitled "My Brother and I, and the Little Captain," which I think is very nice; it seems it was pretty hard for that man to break the chain, but he finally succeeded. I have signed a temperance pledge, and promised that I will never touch any more tobacco, neither to smoke nor chew, and I intend to keep my resolutions. I have not touched any tobacco for over a month.

Frederick O. Seaton.

Banks, Faribault Co., Minn., April 14, 1881.

Very good, friend Frederick. I hope you will always keep that pledge. I am glad that you and your brother liked the books.

I am a little girl twelve years old. Pa has a good many bees. I am afraid of bees, but I pound cobs for the smoker, and carry boxes up and down stairs. My younger sister has a swing out on one of the apple-trees, and watches the bees, and runs and tells pa when they are swarming. I like to read the letters from the little folks. Ma says you must be one of the best men in the world, and she likes to read the Home Papers.

Emma Williams.

Vanceburg, Ky., April 28, 1881.

Many thanks, friend Emma. I am much obliged to your ma for her good opinion; but this morning I have been feeling very sad, because some of those near and dear to me scold real hard because I will not do things that I think would be wrong for both of us. That is a tip-top idea, your pounding up cobs for your pa's smoker, and I hope other little girls will take the hint.

I am a boy 11 years old. I have one swarm of bees, and pa has about 65. He commenced the winter with 94 colonies, but 29 died, and more are likely to die, for it is never safe to count chickens before they are hatched. The reason pa lost so many swarms was, some were queenless, and he was sick and not able to give them brood to raise themselves a queen. My swarm is Italian, and I expect to rear queens from it. Pa says it is worth $25.00 for that. The past winter has been very hard on the bees. Our bees are set in rows, and dirt banked up against them with chaff next to the hives to prevent their rotting. Pa has been feeding them water to induce them to rear brood. I nail up some of the honey-boxes; they are made of 4 pieces. Ma makes the most of them. She is getting to be quite expert in the business. She has made 400 honey-boxes in a day. Who can beat that? I think those cartoons are splendid.

Charlie A. Balch.

Oran, Onondaga Co., N. Y., April 11, 1881.

Very good, Charlie. I am real glad you told how many honey-boxes your mother could nail up in a day, for I suppose that some of the other women whose husbands are bee-keepers will, after reading your letter, get hold of the idea, and try to see how many they can put up in a day too. Has any other little boy got a mother who can do any better than Charlie's mother?

Seeing so many nice letters written by little girls and boys, I thought I would write and tell about *my* papa's bees. Last fall papa made the nicest little houses for them, and mamma and I made the little cushions to put above, below, and around them. The houses were as large as a good-sized dog kennel, and he put them upstairs before he used them, and one day two little girls came over to play with me, and we got in them (the little shingled top came off), and played we were bees. One time our kitty thought the alighting-boards made a splendid place for him to sit on and sun himself; so one morning he went out and sat down on one of them. Pretty soon he began to look around, and by and by he gave a hop, and *we* all knew what the matter was. We used to have some chickens, and whenever a bee got on one hen another would pick it off in such a way as to kill the bee and not let him sting her. But our old rooster thought he would have a feast, so he went along, picked up a bee, and of all the noises that rooster did make! And he went around crying for a long time. Papa takes Gleanings, and I like to read it.

Detroit, Mich., May 4, 1881. Lizzie.

That is a very good letter, Lizzie, and the writing is beautiful; but as you did not tell us the rest of your name, I don't see how we can send you a book very well. Do you?

I am a boy 10 years old. I have a brother who is going into the bee business; he has 4 hives of bees; they came through the winter in good condition; he winters in dry-goods boxes packed with chaff. He is going to get some more this spring, and so am I. I have a sheep and three dollars. I am going to sell my sheep and get a hive of bees with the money. A great many of the bees around here have died. Some men who have kept bees for years have lost all they had. I like to read GLEANINGS and the A B C. ROBERT W. MURKAR.

Aberdour, Ont., Can., April 30, 1881.

Very good, Robert, and I wish also to commend you for such good handwriting, for a boy only 10 years old. If all the big folks would write as plain and neatly as you do, it would save us a "heap of trouble."

A year ago last summer a swarm of bees came to papa up in one of our bird-houses, and Mr. Quinby came and put them in a hive. Last summer they swarmed, and then we had 2 colonies. Last fall papa bought 20 colonies, and sold 2 to one of our neighbors. They put them in a cupboard that was damp, and they were dead this spring. Papa put his bees in chaff hives. He put one of his best colonies in his cellar, and this spring it is dead, and 7 of those on the summer stands, it has been such a hard winter. Papa loves honey, and so do my 3 brothers; but mother and I do not care for it. It is so sweet it makes our teeth ache. We go out to see the bees; they are bringing in pollen very fast. Our dog Major was very much interested in bees early in the season, but one day they gave him too warm a welcome, so he lost his interest in bees. Pa likes GLEANINGS very much. I am 11 years old. I attend the Methodist Sunday-school. We have 150 members, and my brothers and I go nearly every Sunday. We all like music, and we all can sing, and play the organ. CORA M. RUSSELL.

White Plains, Westchester Co., N. Y., May 3, 1881.

A very good report, friend Cora, and we are all the more interested in it, because it gives us a glimpse of our friend D. M. Quinby, of whom we have not heard in quite a spell. I have known other folks, with more sense than poor old Major, who lost their interest in bees "all of a sudden." If I have figured right, your pa has now 11 colonies.

I received your card, book, and sugar. Thank you ever so much. It was 57 quarts of strawberries I picked in a day. We had a good many little girls picking too, and some picked more than that; but I had to quit and help to wait on customers at the house. ANNA A. WHITE.

Wolf Creek, Pa., April 14, 1881.

My pa takes GLEANINGS, and likes it real well. He reads it all through from beginning to end. I read it some too, especially Mr. Merrybanks and the Juvenile Department. I am older than some whose names I see in the Juvenile Department. I am about 13 years old, and this is the first letter of this kind that I ever attempted to write. My pa keeps bees, and has ever since I can remember, and he says he has ever since he was 10 years old; he is now 53. I like honey, and would like bees if they would not sting. I got stung when I was a baby, and it came very near killing me. I had one swarm last season, but they are dead now. Pa has lost a good many; he had 123 swarms last fall, but he says he will send a report, and you will know more about it than I can tell you. I like to read Sunday-school books, and I like to attend Sunday-school, and I do when there is any. LYDIA A. NEWTON.

Whitney's Crossing, Alle. Co., N. Y., April 12, 1881.

Why, friend Lydia, your pa is quite a "big bee-man," if he has got so many colonies as you mention, especielly if he has got them all alive this spring. I suppose you help him "a big lot," do you not?

Papa went to the P. O. yesterday and brought home four copies of GLEANINGS. We sat up until ten o'clock reading them. We like GLEANINGS. I am a little girl ten years old, and have one colony of Italians in the cellar, when they ought to be at work; but our bee-yard is under the snow about three feet. My papa put his bees in the cellar last Nov., but some have died, and the rest are getting uneasy. We have a nice strawberry bed close to the bee-yard, and if you will come and see us and bring Blue Eyes we will have fun picking berries, and swinging in the hammock, while you and papa are looking at the bees. Papa calls me curly head. JENNIE WEBSTER.

Parks Corners, Ill., Apr. 18, 1881.

Well done, my curly-headed little friend Jennie. I should like to come and bring Blue Eyes, above all things, for you know by what I said in the last GLEANINGS that I like strawberries; if you don't my wife does. But what do you suppose all these boys and girls would do here if I should go away? Tell your papa I should dearly love to look over his bees with him.

We have received GLEANINGS, and are having nice weather. You did not come out much better than we did, with your bees. We have just one colony left. It is strong, and carrying in pollen every day, We have not got our bees from the South yet, but we are looking for them about the middle of this month. This is going to be a good honey year. The peaches and apples are in bloom; the woods are getting green fast. I never saw a better prospect for white-clover honey than this year; the prospect for fruit is good. We will have a railroad coming here soon—the Evansville & Eastern Railroad. We are making preparation for a fair next fall.

Salem, Ind., May 5, 1881. FREDDIE CRAYCRAFT.

Why, Freddie, you are quite progressive, I should judge, from your letter. Going to have bees from the South, a railroad, a fair, and lots of white clover. Our apiary is now booming under the influence of 40 fine colonies that came from the south too—about *ten miles* south, and we are sending out bees by the pound at a lively rate. Twenty packages, with queens, go off to-day. Bee-keepers must "never say die." Isn't that so, Freddie?

How doth the little busy bee
Delight to bark and bite;
He gathers honey all day long,
And eats it up at night.

I found the above in the *Apostolic Times*, under the signature of our friend L. C. Root, and thought it would do very well for the Juvenile Class at this season of the year. Within a few days, I have found colonies in just this "predicament." At night, they would have honey scattered through the hive pretty fairly, but next morning not a drop nor cell full could be found. The secret of it was, so many young mouths to feed, and but few old ones to do the gathering. If a cold rainy day should happen, these little fellows would suffer. Who knows how much they often suffer in that way?

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VENTILATION, AND ITS RELATION TO OUR WINTERING TROUBLES.

FRIEND ROOT:—The speculation as to the cause of the terrible fatality to bees through the West, and its remedies, have been the theme for some time. Permit me to add, from my experience and observation, that bad or no ventilation I believe to be the most prolific source of dysentery. One year ago this past winter I had some 30 colonies in a new hive. I was apprehensive that the kind of hive had some thing to do with success in wintering. I took special pains to give them upward ventilation. The lid of the hive is in two parts; the front end of the lid is 6 inches wide, the back end 16, dividing the bees nearly ⅓ of the way. I opened it about one inch, coming nearly over the center of the cluster. My hive is so arranged that I can give them one inch by ten at the entrance; this I did. I had no dysentery; lost none out of 53 colonies. This past winter I was careless, and opened in front, but not on top. Some of them were badly diseased with dysentery; lost 10 out of 86, not all from dysentery, however; made some other mistakes, from which I lost.

One of my neighbors who was wintering five colonies under my instructions called my attention to his bees in March; said they were laying out on the hive in the cellar. I told him I thought they needed more air; went to look at them; 2 colonies were in 8-frame Sayles hive (L. frame), the other 3 in box hives were tiered up, the two Sayles hives underneath, with no upward ventilation. The two lower hives showed considerable dysentery; they were in two tiers, three and two; the two top hives with good ventilation had no dysentery; the one between two showed some; the dysentery showed itself in proportion as they had ventilation. It is the opinion of some, that the same opening that a colony needs or has in mid-summer is sufficient for winter; but this is a mistake; they need more. A cellar under an out-house, or under a room where there is no fire, is objectionable, and four out of five times will prove disastrous.

MOVING BEES FROM CELLAR IN THE DAYTIME.

In an essay read before an Eastern convention by one of the Dadants, in referring to taking bees out of the cellar, he said they should be set out before noon, meaning that they should be set out in the daytime. This is a serious mistake. It is impossible to prevent them from crowding out; they don't take their location, but crowd into other hives than their own; disorder prevails, resulting in demoralization and a free fight generally. Set them out in the night, quietly and carefully. By next morning they are quiet—no rushing out, and every bee knows its location. My estimation is, that one hundred colonies set out in the night are worth at least fifty dollars more than if set out in the daytime.

Brush Creek, Iowa, May 9, 1881. B. F. LITTLE.

Very likely there is something in your position, friend L., for the reports we have recently had in regard to leaving sections on all winter seem to imply as much. On the other hand, I have repeatedly killed moderate-sized colonies outright, by leaving a full draft of air right through the hive, after they had commenced breeding rapidly in the spring. One case was where I replaced a hybrid queen, in a colony that was doing nicely. The cage containing the new queen was a large one, that kept the mat up so the air passed freely through. They had considerable brood for the number of bees, and, a cold spell occurring, they were killed outright. Other colonies of equal strength, well and closely covered, came through without injury. What is it, then, that is wanted? I am much inclined to let the bees answer. In the house apiary, with a two-inch auger-hole entrance, they narrowed it down with walls of propolis, before winter, to about a ¾-inch hole. Colonies with section boxes left over them will close most of the apertures over them, leaving several where one or two bees can just pass, and bees will be seen down through these holes, nearly all winter. Of course, this is the case only where the colony is strong, and they are undisturbed for several weeks before winter sets in. The combs from which our bees died were wet and damp this spring, and many of them are wet, damp, and sticky yet.—One of the great objections I have to cellar wintering is the troubles you mention, after setting them out in the spring. Setting them out very carefully in the night would, I think, help matters at least. Mr. Quinby, in his book, advised setting them out the evening before a fine day is expected, and Doolittle, in his comments, gives substantially the same directions.

Bee Entomology,

Or Enemies of Bees Among Insect Tribes.

MOSQUITO HAWK, OR DRAGON-FLY.

I SEND you by this mail a gentleman who had cheek enough to catch one of my bees and light on my shoulder to eat him. I brought him upstairs and fastened him to my table with a needle through his body, but he just went on with his dinner as unconcerned as if he were not in the condition of a man with a crowbar through his chest. In fifteen minutes he was done, and for the first time seemed to notice that "something ailed him." I send him, thinking some of your friends might like to add him to their collection. I can count a dozen more sailing around my hives as I write.

GEO. L. SHAW.

Thomasville, Thomas Co., Ga., May 1, 1881.

The "gentleman" alluded to is a very fine specimen of the bee-hawk, or mosquito-hawk, spoken of in Cook's *Manual*, and described in GLEANINGS in back volumes. Send the boys after them with sticks and whips. I think they are seldom plenty enough to do any considerable harm, and they are naturally so shy as to be pretty easily frightened away. The one you mention must have been slightly idiotic, I should think, to behave in the way he did. We have them here, of a smaller species, which we call dragon-flies, but I never saw them eating bees.

STINGLESS BEES OF SOUTH AMERICA.

A REPORT FROM THEIR NATIVE SHORES, AT LAST.

IT will be remembered that friend Noelting gave us a promise (see page 193, April No), to write us full particulars in regard to the stingless bees in their native clime. Here is his letter in regard to the matter:—

A. I. Root:—In regard to your wishes expressed by your letter dated Dec. 8, 1880, I send you inclosed my correspondence about "stingless bees" I had with Prof. Dr. Burmeister. This gentleman traveled as naturalist, by order of the German government, through Brazil and the Argentine Republic, and his voyages, described in some large volumes, are highly esteemed in scientific circles. You receive the letters in their original language; I am very willing to serve you as much as I can, but should not like to make myself ridiculous in your language. Germans are so abundant in the U. S. that you will easily find a man who will translate for you the letters. I have also inquired about stingless bees of Paraguay and Tucuman, but have not received any answer yet. My orders I send you next.

J. Noelting.

Buenos Aires, S. A., March 7, 1881.

And here is the translation of the papers sent us:—

To Prof. Dr. Burmeister:—I have received an article and prospectus from the U. S., addressed to Mr. Noeltse, but intended for me, where I am asked for information about stingless bees; but as I have never heard but very little about these insects (although I am much interested about them), and as I would like to give a satisfactory answer, I take the liberty to ask you for information, as far as you have had the opportunity to get acquainted with them. You know the North Americans have an eye for the practical side of every thing, therefore I will ask you to answer the following questions:—

a. Are the so-called "stingless bees" real bees, wasps, or *melipones?*

b. Are they confined only to the tropical zones, or do they live in both the tropical and temperate zones, or can they be acclimatized to colder countries? Are they found in Paraguay or Chaca Tucuman?

c. Do they live in swarms like our bees, multiply the same way, and gather quantities of honey?

d. Is their honey as good as the honey of our bees, and can it be used for as many purposes? can it be crystallized?

e. Do these stingless bees build a solid comb of wax or other stuff, perpendicular with six-cornered cells, or is the web arched with cells on one side? do they store their honey in little pot-shaped cavities, as it is said to be the way with *melipones?*

f. Do you think they could be crossed with our honey-bee?

g. Do these stingless bees have perhaps another weapon for defense, that might be worse or more unpleasant than the sting of our bees?

h. Would the keeping of stingless bees be practical?

J. Noelting.

Buenos Aires, S. A., Feb. 23, 1881.

Mr. J. Noelting:—Your correspondence of Feb. 23 has been received, and I can answer most of these questions with No. I will answer them in succession as you gave them

a. Stingless honey-bees are without exception *melipones*

b. They live in hot and woody countries, and are not found near Buenos Aires. Near Mendoza I found a plentiful kind of *Melipones anthidiaides;* another smaller and more unknown kind I caught near Tucuman. Both of these kinds produce no honey. The honey of the insects of this hot climate is produced by a kind of wasp. such as *Lechiguana* or *Polybia sceetellaries* and *Camuati*, known as *Nectarinia lechiguana;* both of these kinds are plentiful, but not as far south as Buenos Aires.

c. The honey-gathering *melipones* live in large companies, as do our honey-bees; but it is not yet known whether they send out swarms, or how they multiply. In Brazil it is the custom to take a few egg-containing combs (of several kinds) and put them in boxes near by, to induce them to be domesticated, and sometimes with success; but not always, and their new home must always be near their old one in the forest.

d. The honey of these *melipones* is more flowing than the honey of our house bees. If it can be crystallized, it is not known.

e. The webs are upright, and the cells horizontal, like those of our bees, but are generally much smaller; the wax is dark—almost black. I got some in Tucuman to look at.

f. It is impossible to cross them with our honey-bees, as both live in great hostility to each other.

g. The *melipones* have the power, like ants, to eject a biting fluid, which produces a burning sensation; there are about 40 different kinds known; they attack persons in the face who disturb their home, and are very troublesome.

h. It is not probable that they can be kept in artificial hives, as some kinds live in the ground, others in hollow trees, and never in a free and swinging situation, like the before-mentioned wasps.

This is about all that I am able to tell, and wish that it may be of benefit to you.

H. Burmeister.

Buenos Aires, S. A., March 5, 1881.

Friend N., when you will tell us how we shall repay this kindness by serving you as much, we will most gladly hasten to do it.

THE ADVENT OF ITALIANS INTO QUEENSLAND, AUSTRALIA.

DEAR NOVICE:—Will you excuse this liberty?—well, I won't apologize, for I know you delight to hear and publish in your invaluable periodical all the news about apiculture. I observed, in Jan. Gleanings, "Italian bees have been successfully introduced into *New Zealand.* You may now add, such has been effected for Queensland, after a great many failures! You are not unacquainted with these failures; the names of J. G. Cribb and J. Carroll are familiar to you.

It is a long job getting bees to this country direct; but had I to do it again, I am confident I could do so without difficulty (that is, *great* difficulty.) Careful attention would be requisite, of course. You would like to know? Well, I determined to visit England after an absence of nearly 20 years. I told friend Cribb I had a mind to try to get some of the yellow bands over to fight our terrific bee moth. He of course encouraged the idea, and rather flattered me with assurance of success. Carroll, too, said he had no doubt if I got genuine Italians I could get them here. Well, to England I went in June, 1880. I immediately wrote Mr. Hunter, telling him what I required. His son informed me that Mr. H., his father, was ill, and referred me to Neighbour & Sons. (Mr. Hunter died next day.)

I saw Mr. A. Neighbour, and arranged for 5 Italian queens, to be put up in one box with 5 divisions containing 4 frames of comb each, full of *honey*, no brood; each division to be well ventilated, having a drawer at bottom to remove dead; means of feeding through perforated boxes (moistened candy and best sugar was used), and water supply with sponges. It was a rather ingenious affair, but might be improved upon with advantage. The bees were too much confined; on such voyages they need more room, where they can get away from their combs to discharge, for they consume their food ravenously, and distend amazingly, and as soon as the least chance is given, they discharge freely.

Well, thousands of the little creatures died. I was almost sickened at the sight, and was really sorry for them. I cleaned them out and gave them water, etc., 3 or 4 times each week. I had them on the deck house all the voyage, never below at all. Although there were 500 persons on board, not more than a dozen, except sailors, knew that the bees were there. Well, after about 43 days I arrived at Melbourne, Victoria. Having to stay a few days I took them ashore, let them fly excepting one box which had had dysentery. They came out in good numbers, took a fly and returned to the box, then set to work. The next day, eggs were laid. Unfortunately it was bad weather, and I was so circumstanced I could not help them by overhauling or giving brood. I couldn't get any, so I let them fly, gave them feed, and in five days fastened them up again for another 1000 miles' journeying, occupying about 5 days on two different steamers, along our Australian coast.

We arrived at Brisbane, thank God, on the 29th of October, 55 days after leaving Plymouth, England; 50 days' actual traveling and confinement for the bees. How were they? *All the queens were alive*, all the stocks weak—one that had suffered dysentery was very weak. I let them fly as soon as I got them home, and they *did* fly. I could not attend to them on that day. Next morning I found *one queen* outside, nearly dead. On examination, very few bees were left with her. I had four queens left. I was not in a position to manipulate them right away, and, wishing to be careful, waited till Mr. Carroll could help. In a few days he took two queens to work up. I kept two; he, Mr. C., introduced one into a strong stock of blacks, and commenced queen-rearing right away. The other, he tried to build up; but, *both his queens died unaccountably*. I went on, cautiously building up until I worked up 2 good strong stocks. The young Italians came out with their yellow bands, and vigorously pushed foward honey-gathering and brood-rearing, far outrunning the ordinary black bees. I have just been dividing, and have now 3 young Italian queens starting laying; expect 3 or 4 more in a week, and should any of them form a misalliance, which I quite expect, if I can only keep the imported queens till next spring I can soon remedy the hybridizing, as I shall have only Italian drones. By the way, my Italian drones are as much like black drones as two eggs. Should this be so? We are dubious about imported articles, as we have been "taken in" so frequently.

I wish it were less difficult getting things from you. There are a good many things I want, but see the bother and time it takes.

I will let you know next spring how we get on. I saw in GLEANINGS awhile since, that somebody asserts, or wants to know, "you know," if bees in Australia are less industrious than elsewhere. No, sir! they are equally industrious, but not so the keeper. We have not the flows of honey you have from your various growths, and sometimes honey is scarce. Bees can not find it where none exists. Other causes than lack of industry on the part of bees cause the difference.

Now, friend Root, I would like to try those Holy-Land and Cyprian queens, just the best. Can we not manage to get some through? Have you any one at 'Frisco you can trust to receive from you—see that they are all right? if not, make them so, then put them on one of the mail boats leaving 'Frisco for Honolulu, New Zealand, and Sidney; give them in charge of the chief steward, with instructions how to manage them, and not to get quit of them but to a person appointed at Sydney to take charge of them who would forward them to me; or have you any one at New Zealand who would see them when they arrive there, and see if they require help? The journey would occupy 28 days from 'Frisco to Sydney; 3 days from Sydney to Brisbane. Now, I think you could put up 4 or 6 queens in a box in such a way that they would come through, after I have brought 5 stocks through from England. I will pay all expenses, and give you highest price on safe arrival. C. FULLWOOD.

Brisbane, Queensland, Aus., March 1, 1881.

P. S.—Mr. Jones and I must have been in England at the same time. I am sorry I was so much engaged in business I did not hear of or see him. I would have tried him for queens, as I am so anxious to beat our abominable moth by the introduction of the best bees if we can do it. Friend Carroll has so often failed he is disheartened. C. F.

Your drones are all right, I think, friend F. A great many of the Italian drones look so near like our native drones, that there is, as you say, but little difference in appearance. Other Italian drones, however, show a great deal of yellow. It seems to me that our friend Frank Benton is the one to send you Holy-Land and Cyprian queens direct, and he is perhaps as much of an expert in the business as any man we have in the world. Our friend D. A. Jones, of Beeton, Canada, would be perhaps the man to confer with. R. Wilkin, of San Buenaventura, Cal., is as careful a man as I know of on the Pacific coast. We see by the *American Bee Journal* of March 30, that Mr. Alfred Newman, son of the editor of the above journal, sent a whole colony to New Zealand, which arrived safely. As he has had experience in the matter of such long shipments, would it not be well to put the matter into his hands?

LEAVING SECTIONS ON ALL WINTER, ETC.

A "VISITING" LETTER FROM FRIEND WILLIAMS.

I HAVE always left section boxes (or, rather, surplus boxes) on some hives, and they seem to winter best if protected. This leads me to believe that we ought to prepare our bees for winter in September, which gives them a chance to close up every crack, and the boxes on top allow the perspiration to rise in the boxes. We can see the sweat on the glass in them. They are not as apt to have dysentery. Most of my surplus boxes are made so that six cover the whole top of an L. hive, and take an 8x10 glass cut in two pieces lengthwise.

I have lost 10 out of 80 this winter. To feed, I fill one side of a comb with honey or syrup in the shop; take out one and put it in so they can get it; if it is cold your candy bricks would be better; have had a cake of grape sugar on the frames of one since March 1. They have eaten nearly all of it, and are in good condition.

When a bee won't get out of the way I catch it by the shoulders and put it where I want it. Just try it, A B C class; you will soon learn it. I learned it in GLEANINGS. You can all laugh if you feel like it. I use small rocks on top of hives instead of slates. One rock indicates one thing, two some thing else, and so on. Dates I keep in a book in a pocket back of the comb-carrier; long knife and feathers in front; pockets at the ends for cages; it is made of thin basswood lumber, with leather handles like your tin ones; that is, the box is like your tin ones carrying three and four combs. The wire-cloth queen nursery in second story will do when honey is plentiful, but not if the season is over. The queens I raised last year cost me more in honey than I sold them for. I will raise for myself and a few friends only this season.

The springs in my Simplicity smoker kept breaking until all were broken. I then took the coiled bell-wire of an old clock, pulled it out and set it in with screws, and it works first rate (no patent.)

M. L. WILLIAMS.

Vanceburg, Ky., April 10, 1881.

Your idea of using clock-bells for smoker-springs is novel, friend W., and I have sent to the factory to see what they cost per thousand.—I often move bees in the way you mention; but if they are hybrids, I am pretty sure to get stung. We like slates on the hives better than any book, and we find it takes less time to read or write on them. My experience with queen nurseries over hives is about like your own.

I have just been reading what you say about bees that have been wintering well with the section boxes on top, and you say, "Now has anybody else been guilty of leaving the sections on top all winter?" Well, I did not leave any sections on during the winter, but I will tell you what I did do. My neighbor, friend, and brother bee-keeper, Mr. John P. Clark, came to see me some time in February. He often comes to see me, and we always have a good bee talk, "you bet." Now, just listen to what he said:

"We bee-keepers, with all our nice bee-fixtures, have not yet learned how to winter bees successfully." (He lost about half of his bees this winter; he has a patent moth-proof hive, and also other kinds.) Then he told me to take that nice cushion out of one of the chaff hives, just to see if the bees would not winter without so much stuff on top of them. He says we keep our bees too warm. Well, I took the cushion out of two of the chaff hives, and just put a few pieces of old cloths on top of the mats, and after that we had some of our coldest weather here (about 18° below zero.) I did think that the bees without the cushion would all be frozen up to a solid mass; but they are to-day just as lively as bees can be, and so I think that friend Clark might be partly right, that we have too much on top. I will try some next winter with a very little on top.

OTTO KLEINOW.

Detroit, Mich., April 20, 1881.

It may be that very strong colonies sometimes have insufficient ventilation, with so much chaff packing; but I am sure, friend K., that using a single cloth over the clusters will not, as a general thing, work well. In the A B C I told you how I tried it in the house apiary, and of other experiments I made with thin-walled and unprotected hives. At the same time, these reports seem to indicate that there are some queer things about wintering bees that yet remain unexplained.

A neighbor of mine always neglects taking sections off some of his hives. He has lost none of his bees, and a year ago the wind whistled unhindered all winter right through the sections; but I would not advise this method. I believe this neighbor has the strongest colonies in this section now, but he takes only about 30 lbs. of honey per colony, while I average 60. He leaves the brood-combs crammed full of honey, while many of mine are light, and too quickly exhausted for protracted cold weather.

Oxford, Pa., May 7, 1881. S. W. MORRISON.

* * *

UPS AND DOWNS.

WHAT SHALL WE DO WHEN WINTER COMES AGAIN?

A NEIGHBOR of mine sold a colony of bees to another neighbor—a Swede—and in a day or two after they were delivered, the Swede wanted the seller to take them back, saying that he had been cheated in the purchase, as there were "five dead bees in the hive." Most of the bee men in *this* locality would have felt encouraged if they had found five *live* ones in each colony this spring. When inquiry was first made as to losses (about April 1), I thought 80 per cent of all colonies in this vicinity had perished. I now think 90 per cent loss would not be too large an estimate. Seven of my neighbors lost all. I have lost to date, 33 per cent. The remaining ones are apparently in good condition. I do not expect to lose more. No one around here has wintered with so little loss, so far as I know. Nearly everybody winters in cellars, but not under proper conditions. I have before observed that, if a cellar is too cold to keep potatoes, it is too cold to keep bees. Every winter confirms the theory that a *damp* cold is fatal. I think that in this latitude, 43° north, and *altitude* some 1600 feet above the Gulf, cellar wintering is the only safe plan. That so many have failed the past winter does not prove the contrary to be true, when we learn just what kind of a depository they were in, and in just what condition they were when put away. I have taken some pains to get at the facts, and I am disposed to lay the blame, not to indoor wintering, but to ignorance and carelessness. Some people have to "tail up" their cows in the spring, although stabled all winter. Is that an argument against barns? It is a plea for better barns and *better care*.

Bees began to bring in pollen April 20. The weather has been pleasant most of the time since, and the "music of the hive" has been delightful.

Silver-maple, poplar, willow, etc , in bloom for some days back. Breeding is well under way.

Please don't write to me for bees or queens this year. I keep bees for the *fun of it*, and not to sell.

EUGENE SECOR.

Forest City, Iowa, May 5, 1881.

CHAFF PACKING CONTRASTED WITH OTHER MODES OF WINTERING.

A FEW FACTS FROM "REAL LIFE."

I WILL send you my report how I wintered my bees. We have had a very cold and severe winter. It was 25 to 30° below zero when it was the coldest, and the bees had no fly from the middle of Nov. to the middle of Feb., and then only a few days that they could fly till the middle of April. I use the Langstroth frame. In the fall I had 50 colonies; 33 were full colonies, and 17 were nuclei; these I built up through August and September to about half-full colonies. The full colonies I put on 6 frames for winter, and the nuclei on 4 frames. I then put a box over the hive that gave 4 in. space around the hive, which I filled with wheat chaff, and packed it right well down. I then made holes through the combs, and put a sheet of duck on the frames, and then a chaff cushion 6 in. thick, and then a good roof on the box. This I did in October; then I did not disturb them till spring. Now for the result: All are alive, and are breeding fast; they are as good as can be expected for such a backward season. I think packing in chaff the best method of wintering bees for this latitude.

On the inclosed sheet you can see how the bees wintered in this locality, in what kind of hive, and how prepared.

HOW THE BEES WINTERED IN OUR VICINITY.

NAMES.	COLS. FALL OF 1880.	COLS. SPR. OF 1881.	KIND OF HIVE USED, AND HOW WINTERED.
J. Buckwalter,	10	10	L. hive, packed in chaff.
J. B. Sensenig,	15	4	Am. and box hives, no protect'n.
C. Sensenig,	42	24	Am. hive, packed in chaff.
R. Sensenig,	2	0	Am. hive, no protection.
E. W. Martin,	2	0	Am. hive, packed in chaff.
I. Weaver,	5	0	Am. and box hives, in cellar.
D Nolt,	4	2	Box hives, no protection.
E. Sensenig,	15	0	Am hives, no protection.
J. Reiff,	3	1	L. hive, no protection.
S. Taylor,	3	1	L. hive, no protection.
I. Martin,	4	1	L. hive, no protection.
S S. Henry,	6	1	L. hive, no protection.
Geo. E. Wright,	9	2	L. hive, no protection.
Daniel Nolt,	9	3	Am. and box, no protection.
J. Davis,	40	39	Mitchell hive, packed in sawdust.
D. Stolzfus,	26	13	Buckeye hive, with straw or hay.
S. Dillman,	25	22	Buckeye, with straw or hay.
J. High,	4	0	Buckeye and box, no protection.
G Dillman,	13	2	Tall frame hive, no protection.
M. Wenger,	3	3	L. hive, with chaff.
C. W. Zimmerman,	3	2	L. hive, no protection.
I. G. Martin,	50	50	L. hive, packed in chaff.
Total,	293	180	

No. of colonies packed for winter, 198, of which 37 died, or 19 per cent. No. of colonies without protection, 90, of which 71 died, or 79 per cent, and 5 were put in a cellar, all of which died.

I. G. MARTIN.

Reidenbach's Store, Lan. Co., Pa., May 9, 1881.

I must confess that the above, and similar reports, goes a great way toward making me hesitate in deciding that even cellar wintering is a safer plan to advise than outdoor wintering, with good chaff packing. One point should be borne in mind, and that is, that those who are so thorough as to give their bees good packing, would be likely to give thorough care in other respects, that those who entirely neglect their bees would not. It is not altogether whether old hands, with their hundreds of colonies, winter in cellars or otherwise, that we wish to get at; but how will the great masses of A B C scholars,—those who can ill afford these wintering losses, do the best? Our neighbors Harrington and Shane have wintered fully as well as those of our neighbors who used cellars. Many thanks, friend Martin, for your full report. Such a summing-up as your report gives, can not be accidental.

FERRY'S SEED-GARDEN AS A HONEY-FARM.

HOW THE BEES WINTERED.

I PROMISED you last fall to report how my bees wintered at Ferry's seed-garden. You will notice in my letter last fall (see p. 379) I mentioned one of my swarms they had the dysentery very badly. That one died, and another this spring; the rest have wintered finely. I packed the upper story with planer shavings. No more chaff cushions for me; they don't fill the corners right. My bees at home are three-fourths gone. One of my neighbors had 100 colonies last fall, mostly in box hives; only five survived the winter, and three of them were in chaff hives I let him have. In your remarks on my letter last fall you expressed a desire to see an apiary near a seed-garden, and I am going to tell you how you can do it. This will probably be a dull season for the supply business, so just start some morning in June and I will meet you in Detroit with a good carriage and fast horse, drive to the garden and apiary (the latter is situated just over the fence from the garden, on a beautiful lawn.) Then we will drive to Bell Branch to tea, and, if you will come so as to stay over Sunday, I will go to church and Sunday-school with you, which, by the way, would be quite an undertaking for me, as I have not been for five years, excepting once. There are two churches within forty rods of our home. I don't speak of this to boast of my heathenism; will explain it to you, should you come. As another inducement, I will show you the best and handiest chaff hive in existence (no patent.) I expected to give you an order this spring for 10,000 sections, honey-extractor, 15 smokers, etc.; but, alas for human calculation! man proposes, but, but, but, the hard winter *disposed* of all the bees nearly.

M. H. HUNT.

Bell Branch, Wayne Co., Mich., May 5, 1881.

Friend H., I rather think I will accept that invitation; but as June is a very crowding month with us, suppose we say July or August. Neighbor H. thinks he would like to see the seed-gardens too, and perhaps if we fix a day, some of the bee friends near you might like to meet us there. Please bear in mind, we are all to go to church and Sunday-school, and leave the bee-talk, all of it, for week days. This may be rather hard on neighbor H., for if he couldn't talk bees on every day in the week, Sunday along with the rest, I do not know but that he would almost suffocate. During what month will we find the most plants in bloom that bears honey? I have been looking over Ferry's catalogue, and I am considerably impressed with the magnitude of his grounds and business.

Heads of Grain,

From Different Fields.

NEW HONEY.

Thursday, April 21, I extracted from 5 colonies, getting 10 gallons of fine honey; to-day, 23, the same frames are refilled and partly capped; but on account of rain, almost incessant during the day, I have not extracted. Monday will find me at it if the weather is favorable. I think I shall be able to send sample of holly honey to you again. I do hope the true position or classification of our Southern honey will yet be attained. I am sure our holly honey, when first extracted, and unmixed with other honies, will compare favorably with the far-famed white-clover honey of the North and West. I sent you a sample a little mixed one year ago, and you pronounced it good, I am sure, if I could procure a sample as I did 3 years ago, unmixed, you would exclaim, "Hurrah for the holly!" Why this has been overlooked by bee-men of the South I am not able to say.

Up to date, from 8 colonies I have taken 42 gallons, and, oh! it would do your soul good to see the bees at work to-day. Yes, right now, 5½ o'clock, and still it comes. We must thank God, and say, we'll never murmur again. W. F. Roberts.

Clinton, La., April 28, 1881.

LARGE INCREASE.

I received a copy of Gleanings from you last fall, and I thank you very much for the favor. One man said that he started with 15 colonies in the spring, and in the fall he had 80. How did he manage it? Please answer, as it is of importance to me, for I am just starting in bees.

BORAX FOR DYSENTERY (?).

I fed my bees borax the past winter to prevent dysentery. It proved a success; did you ever hear of it before? However, the medicine that proves a success one time may prove fatal the next.

L. B. Stanger.

Hopkinton, Iowa, April 15, 1881.

It is not a very difficult matter, friend S., to increase 15 colonies of bees to 80 hives having bees in them, in one season; but if the man has got the full 80 now, it would be some thing a little wonderful. Suppose you write him and ask how many wintered. No doubt your bees were a success after giving them borax, but I am by no means sure the borax was a success. What reason have we for thinking borax has any effect on dysentery? And, if you will excuse me, how did anybody ever think of giving the little fellows borax? I confess I am incredulous on the whole subject of medicines, especially when given without a reason, as most of it is. (Perhaps I should add, out of the line of the regular practice.) I once heard of a man who had a fall, and was seriously injured internally. Before a physician could be obtained, an old "darky" doctor came in and administered a potion to the poor suffering sick man. When asked by the doctor what he gave, he replied, "Rosin and shot." When pressed for a reason for such a singular combination, he replied that nature would probably need some materials for mending the breaks, and the shot and rosin was the best of any thing he could think of. Now, there is a sort of sense in this poor fellow's reasoning, but I can't see any reason why borax should cure dysentery. Of course, there *may* be a reason, but I should want to see it proved by a great many experiments. I feel in much the same way about remedies for bee-stings. You know I never publish any; and, for that matter, I believe we have never had any medicine advertisements in Gleanings at all.

QUESTIONS.

What will, or what is, the quickest, cheapest, and best way to build up an apiary from 15 swarms of bees, mostly blacks, and still get the most profit this season? What kind of honey-plant, tree, or shrub, will come the nearest to filling the place of basswood, as to the quantity of honey produced at that season of the year, and also quality of honey? There was once plenty of basswood near here. It has nearly all been taken off. We have several acres of side-hill land, very steep. Answers solicited from experienced bee-men. H. F. Newton.

Whitney's Crossing, Alleg'y Co., N. Y., Apr. 12, '81.

Why, friend N., your first question has so nearly taken away my breath (in its magnitude) that I can hardly get a square view of the second. It is my impression, however, that notwithstanding all the present light we have on the subject of honey-plants, it might cost a thousand dollars to get any plant that would fill the place of basswood, even for a single locality. The Simpson and Spider plants will come the nearest to it of any plants I know of. I have written a book of over 300 pages almost solely to answer your question as to the best way of building up an apiary of 15 colonies (or of any other number for that matter), and I am making additions to the book every few months, even yet.

ADVICE TO THOSE BUYING BEES.

The following, which we clip from the *Indiana Farmer*, has much good sense in it:

> To those who contemplate buying bees, we would say, do so at once. Buy now so as to take advantage of the season's work. If you can not afford to buy full colonies, get good, strong nuclei; buy them early, and they will grow into good colonies during the season. It is best to buy as near home as possible, as express charges are very high. Send to responsible dealers, and stipulate that the bees must come early, so as to have advantage of all the increase of the season. If they can not do this, ask them to return your money, and try some one else. Remember that a good colony now is worth a third more than later in the season.

SWARMING WITHOUT A QUEEN.

S. P. Yoder's account of his bees, mentioned on p. 132, March No., and again on p. 191, April No., by E. Sanford, is rather singular, as I always thought myself sure of the swarm when I had the queen in my hand, until two years ago, while attending bees for Mr. T. on shares. T., taking care of swarms issuing in my absence, the bees took to swarming, and soon he had a swarm in each hive I left there; and still they swarmed, and Mr. T. had to make use of his old box hives until he had three swarms in. As I had cropped the queen's wings and T. failed in finding them, all three swarms stayed and went to work, and not one had a queen, but plenty of fertile-worker business was going on when I got there. The two first swarms had each gathered about 10 lbs. of honey, which I cut out, put the bees in frame hives, giving each some comb and brood and a queen, and they got along all right. The third swarm I left in his box, just to convince him how long a swarm will live without a queen or any thing to raise one. In just one month the bees had fizzled out, and the moth had possession of the old box. Since that I look a little out for the swarm as well as the queen.

G. J. YODER.

Middlebury, Elkhart Co., Ind.

HOPES NOT ALL BLASTED, EMPTY COMBS, HIVES, &C.

I have nearly every No. of GLEANINGS. I have not subscribed till now this year, as my bees are about all dead. Out of 25 hives I had last fall there are two of them with living bees in them (both weak.) I never had my bees in as good order for standing the winter as I had them last fall; but long-continued cold killed them. They ate tremendously. Plenty of them left honey and any quantity of bee bread. I have melted down a good many combs, but have a great number left which I don't like to melt. I have smoked combs with brimstone, but even then it is hard to keep the moth worm from destroying them. What would you do with them if you were so situated? There is, in a great many of the combs, honey undergoing granulation; also bee bread. There is no use in thinking of buying bees here to take up the combs, for there are none to buy—mostly all dead, and it seems little use to try to increase them just to die in the winter. I have a great many empty hives which I expected to fill, besides a great deal of bee fixings of no manner of use but to burn; if you can help any in this scrape by your advice, please do so.

I have read GLEANINGS till now, so send it along, beginning with the April No.

I am not sending for GLEANINGS because my bees are dead; but your answer, if it helps me, may help others also who are in the same fix I am.

I guess I thought too much of my bees; but my wife died about a month ago, and the last trouble killed the first; we had lived more than 55 years together; but, thank God, I do not sorrow as those that have no hope, for my wife was a Christian, and I am living in trust to meet her again. You are not to put me in Blasted Hopes, for I have a hope that I would not sell for all the bees on earth.

Do you think, if I were to steep the combs with no honey in them in cold water, and then throw out the water with an extractor, then dry them, that that would kill the moth eggs that might be in them?

Do not put my name to this; call me "Old Fogy," or any thing you please. J. D.

Pontiac, Oakland Co., Mich., April 20, 1881.

Friend D., do not think of melting up your combs, or throwing them away in any other way. Brimstone is a certain and sure remedy for moth or moth eggs, if used as directed in the A B C. By no means put the combs in water, or any thing of the kind. Keep them dry; and if you do not use them all this season, you certainly will next.—You, like many others, will do well to go slowly in deciding to abandon bee culture. If you should decide to do so, retreat in good order, and by no means think of sacrificing valuable property. If there is no demand for the combs now, there certainly will be in due time.—Hold on to that faith you allude to in you last, friend D., and bear constantly in mind that, though heaven and earth shall pass away, God's words shall never pass away, and those who put their trust in him shall in *no wise* be cast out.

WINTERED SUCCESSFULLY!

I never wintered with better success in my life than the past long cold winter that has been reported so universally disastrous to bees. I can not see what the long cold winter has to do with success so long as the bees are in proper condition, and kept so inside a warm house. I set out 140 colonies the 15th day of April that had not seen the light of the sun since Nov. 15th. They seemed quite astonished at the warm sunshine of an April day. Their Rip Vanwinkle sleep had carried them over a long experience of 5 months of cold and storm in the outside world. Four little weak colonies only had perished by getting away from their stores, and starving. I am satisfied I could have kept them in a month longer in good condition, but did not deem it wisdom to do so, as brood-rearing had nearly ceased for lack of pollen and water.

I fed flour liberally for a few days when natural pollen appeared. They are doing nicely now, filling up with food and young bees. I wintered 70 colonies at another place in another house, but could not obtain the conditions I considered necessary for certain success. These did not winter quite so well, the loss being 6, light colonies mostly, although from the cause before mentioned. The bees, too, were not all in that fine bright condition the others were. These were set out at 4½ months, and they are also doing well. No cushions, no chaff packing, no fussing, housed in a bee-house constructed for the purpose, in view of success; temperature averaged about 40°; artificial heat at times. The bees gorged themselves on apples, peaches, and grapes all the fall. About half the swarms were quite light in stores when put up. Wintered in the same place and manner during the warm winter of one year ago, with equal success. I am entirely unshaken by the numerous reports of the fearful disasters in wintering. I am quite certain that, with proper management, bees may be wintered with as much certainty as any other stock at all times. H. R. BOARDMAN.

East Townsend, Huron Co., O., Apr. 29, 1881.

RED-CLOVER HONEY, ETC.

Did you ever see the drones block the entrance of the hive when they are expelling them in the fall? We had one do it last fall effectually. We had a poor season last year. I began the season with 26; increased to 34; got over 500 lbs. box honey, 100 extracted, 200 in cards that I neglected to extract. If I had not let any of them swarm I would have got 400 lbs. box honey more. It was those that I put boxes right on before they swarmed that gave me most of the honey. Year before last we had one swarm that stored over 40 lbs. red-clover honey in boxes. My "best half" said that was just splendid; so say I, and the little ones too. We have a great variety of flowers. I do not think that basswood yields very much nor very long at a time. We always get some surplus; have kept bees five years.

JOHN CROWFOOT.

Bloomingdale, Van Buren Co., Mich., Apr. 20, 1881.

WORTHLESS QUEENS; BE CAREFUL HOW YOU THROW THEM AROUND CARELESSLY.

A young queen, raised last summer after the old queen and swarm came out, was discovered in March to be without brood. I tried stimulating by feeding and increase and brood for 4 or 5 weeks without success; removed her, and found she could not fly. How was this? how was this colony kept up from July till March, if she never laid? Perhaps I had better state, that last fall I lost a worthless queen I intended to destroy, near this hive. Could this queen have got in and superseded the natural queen in the fall? W. R. Whitman.

New Market, Ala., April 5, 1881.

Very likely your colony was ruined in just the way you mention. A poor or worthless queen is almost as likely to sting a good one, when allowed to crawl into the hive by accident, as to have it the other way. It may be, friend W., that the young queen laid worker eggs all right for a few months, and then failed, and her wing may have been injured on her return from her bridal flight; but the former explanation is far the more probable. When you know a queen is worthless, be sure to make sure work of her; do not leave any chance for her to get into some other hive and kill its queen.

LOOK OUT FOR ROBBING.

My bees are not more than half as good as they were a week ago. I was busy plowing for corn, and did not notice them for two or three days, when my wife called my attention, saying, "The bees are robbing." I went to their assistance, and found that my father's bees had almost all the honey that my bees (9 colonies in all) had. I am feeding my bees now, for I don't want to go into Blasted Hopes yet.

Columbus, Kan., May 2, 1881. Wm. Kirk.

While robbing is not very apt to get started where all are fair strong colonies with queens and brood, it is sometimes the case, especially early in the spring, and on this account it is always well to take a little look at the bees, once or twice a day, no matter how busy you may be. A stitch in time, certainly saves nine at such a time.

FRIEND HILL'S APIARY, AND THE SECRET OF SUCCESS.

I see a little note in May Gleanings in reference to Mr. Hill, of Mt. Healthy, Ohio, not having lost a stock of bees in the winter for years, and suggesting that bee-keepers hold a convention at his house next fall and learn his secret. As I was a member of an impromptu convention at his place last fall, I will tell you what I think is his secret. It is simply, *the doing of every thing needed to be done, thoroughly and well, having no poorly made hives and implements about him, and allowing no slipshod management.* I think this is without doubt the secret of his success; and if you visit him at any time, I don't think you will find any of his hives so poorly made that you can stick a finger through joints that ought to be tight, nor will you find the chaff he uses in packing them to be only straw. I think all of us can learn some valuable lessons in Mr. Hill's apiary; at least, I know my visit there was one of the most profitable as well as pleasant ones I ever made anywhere.

O. O. Poppleton.

Williamstown, Iowa, May 5, 1881.

UNTHANKFULNESS.

On looking over Gleanings I noticed that some people murmur because they lost 5 or 6 colonies. I have often thought, if it would rain mush and milk some people would run around and murmur because it did not rain spoons to eat it with. Two men here had 500, and lost all. I don't think we have over 24 in the township. We had 26, and lost all; but "don't you forget it," we have lots of honey. I guess Mother Shipton's prophecy came true after all, for some people made or thought the world of their bees, and it has come to an end. With a swing of my hat I'll go to Blasted Hopes.

Locust Point, O., May 5, 1881. F. G. Windisch.

Why, friend W., I do not believe you belong in Blasted Hopes at all. That is expressly for unthankful folks who listen to such foolishness as Mother Shipton's prophecy and the like, and sit down with folded hands and give up. I do not know how I am going to winter our bees next winter; but for all that, I am going to have an apiary in full blast again this season as usual, and if I can not do any better, I am going to buy more every spring of neighbors Rice and Dean. Losing bees makes us neighborly; did you never think of it? I do not believe the world will end with me, if I lose all the bees I ever try to winter. The bees may pass away, but our trust in God, never.

SWARMING IN MICHIGAN MAY 12TH, ETC.

Well, I must say, "Hurrah for chaff packing!" I hived my first swarm to-day—a rouser. How does that compare with Mrs. L. Harrison's "bully" colonies? I have 7 more clustering outside, and cherry fairly in blossom. I have put hives on top of 2 to keep them back from swarming, and filled the top hive with my nice comb of last fall. I saved 18 out of my 20; one had a drone-laying queen. I divided that colony to find the queen on "Good Friday," and one part has a young queen, and the other has queen-cells. I have only 2 that are weak, as I call them; others call them fair swarms. Now I am going to see what I can make out of my Good-Friday nuclei.

Just tell the bee-keepers not to be discouraged, but be a little more careful not to disturb bees in winter. I gave this that swarmed to-day, 2 frames of coffee A on the 2d of Feb.; one on the 25th ult.; one March 10th, and some of the rest near the same, and disturbing did not hurt any of mine.

I want to tell you that my bees made comb in the feed-boxes on top, that had nice sealed soft-maple and elm honey in it, and I got a good taste of it. It is very good, but as dark as maple syrup.

St. John's, Mich., May 12, 1881. H. L. Warstler.

Why, friend W., has not that swarm got you excited a little? You say, do not disturb the bees in winter, yet go right on to tell how you disturbed them with frames of candy in February! I am very glad to hear you report so well in regard to the chaff hives.

SWARMING IN ILLINOIS, BEFORE THE 10TH OF MAY.

Hoping to encourage others, and glad to report encouragingly, we ask, "Who is ahead of us, in this latitude?" This morning at 10 o'clock, "Bees are swarming!" came from the little wife, who keeps an eye on things about our place. A fine swarm it is too. The queen is two years old. Last season we had but two natural swarms. This queen was first, and from red clover at that, as we had no white-clover honey last season. It was the 14th of June, and they filled their hive, and gave us 50 lbs. of basswood honey, in sections. They were wintered outdoors in single-wall hive, with chaff in top box, and sawdust banked up on back and sides of brood-box.

Fruit-trees have been in bloom three days, and you may tell friend Doolittle that I think I will have the first queen from natural cells, as several cells are sealed, and more coming on. As they are pure and well marked, I shall save 'em all, "you bet."

S. A. SHUCK.

Bryant, Fulton Co., Ill., May 9, 1881.

A GREAT SINNER, AND—WATERMELON-JUICE FOR BEES.

You say, on p. 225 of GLEANINGS, "The above report is from myself, A. I. Root, editor of GLEANINGS." Now, this makes me think of an incident that happened about thirty years ago. My father and I got lost in the then wild woods. After my father had tried every direction in vain to find home, he said, "Washie, tie old Snip's reins up, and let her go. Look out for limbs." And she did go straight home, and, strange to say, we were within one-fourth mile of home! Are you lost or not? is there no society in Medina for the prevention of cruelty to animals? were *you* not indirectly the cause of the death of three billion bees? Just think of it! I think surely there would be less *sin* in the old fire-and-brimstone mode. What would you think of me if I were to tell you I lost one hundred fine calves by selling the milk that belongs to them, and for an excuse I should say, "I could make more out of the milk"? You would say, "Shame on such a way!" and so do I. I do not say this to find fault, but I do think there is a better way of treating our little pets; and, brother Root, I do think you need a little reproving right here. What say you?

My bees wintered better than ever before. I found the hive that packed the most watermelon-juice wintered the best. I fed several hundred watermelons to my bees, and they were all packed in sawdust. They are now working in the caps. I have several queens laying that I raised this spring. The first one began to lay April 19. GEO. W. STITES.

Spring Station, Spencer Co., Ind., May 9, 1881.

Why, friend S., I am a *great deal worse* sinner than you represent me. I have not only let all my bees die, but I have been instrumental in bringing into existence bees all over our land, and other lands too, that have died as mine did, and not only this past winter, but other winters as well. I would most gladly tie up the lines and let old "Snip" guide us safe home, if that would do it. If you mean they would have wintered better in the old brimstone way, and box hives, I will tell you that a neighbor across the street had a lot of box hives last season, and talked almost all season long of the advantages of box hives and black bees to stand the winter, etc.; but his box hives are *all* dead long ago, and the only four he saved out of an apiary of 25 or 30 were Italians in chaff hives, prepared just as mine were. In fact, the past winter has almost "extinguished" black bees and box hives the country over, and we are now ready for Italianizing, in a way we never were before. If you mean that we let our bees starve, I can tell you that we have combs filled with good sealed honey, in such quantity that I hardly know what to do with them. You have wintered all right, but hundreds have wintered all wrong, where (to be frank) it is pretty hard to tell why. The only *sure* way that I now see is protection by good cellars, such as George Grimm and others use; but some of the reports would seem to indicate that even cellars are not "*surely* sure." Your watermelon report begins to shake my faith again, for I would have said, surely, *that* colony will die. Right on this point, the *Prairie Farmer* gives a report of excellent wintering of an apiary right close to a cider-mill, where the owner expected they would all die, from incessant working on the cider. So well convinced was he of this, that he moved a great part of his bees away to save them; but those he moved away died, while the cider-fed ones lived. How much do we know about it, after all?

A DISAPPOINTED A B C SCHOLAR, ETC.

I suppose you want all of your A B C scholars to speak their little piece, so I will make my bow. Last June I bought an A B C book of you, and two colonies of bees of Wm. Cary, Jr., of Colerain, Mass., and took my place at the foot of the class. I began dividing and building up colonies, and by fall had seven strong clonies and two weak ones. The two I united with two others, and prepared them for winter by putting three in chaff hives according to your directions, and four in a good dry cellar prepared as friend Cary does his. I determined to try both plans, and satisfy myself as to the better way to winter; but to my disappointment all of them came out strong and in good condition, so I am as much in the dark as ever. Almost every one who has bees lost part or all in this section this winter.

WHY THEY ACT SO.

And now please tell me what one swarm of my bees are trying to act out; they are the only ones that came out naturally last summer. I hived them the 7th of July, and they have done as well as any of the lot; but from that day to this, when it is warm enough for them to be out, they are continually pulling and hauling each other around on the alighting-board; sometimes one and sometimes four or five will get hold of one, and they will go over him as though they would tear him all to pieces. I thought at first there was robbing going on. Sometimes the victim takes it quietly until they get done with him, and then walks quietly away; at others, he tries hard to get away; but I don't know that they ever kill one. It can not be they are daubed, and these are cleaning them off, for none of the other swarms have any such trouble. If you can, please tell me what it means, and if I can put a stop to it, as it annoys me very much. I shall hope to see it in GLEANINGS for June. J. W. MERRILL.

Norway, Maine, May 9, 1881.

The bees that they pull about so are, if I am correct, young bees from some other hive, that have got in there by mistake. They do not want to kill them, as they would robbers, yet they wish to give them to understand clearly that they do not belong there, and are not wanted. The reason why you see it in this particular hive and no other is, I think, that some other hive stands too close to this one, or at least has such a resemblance to it that the young bees are continually getting confused. It is a rather common phenomenon, and has several times been commented on. If any one has a different explanation, we should be very glad to hear it.

A GOOD CROP IN A POOR SEASON, AND THE SECRET OF SUCCESS.

My report for 1880 is this:—No. of colonies May 1, 65; net proceeds for honey sold, $500.00. Secret of success, 3 pecks of Italians to the hive. Bees wintered in cellar as directed in A B C. No. lost, 5 colonies; cause, too much cider. The rest, 60, are in good shape, with brood in 3 to 5 combs, and plenty of honey. I have been watching your chaff hive with interest, and like it very much, but object to cost in large apiaries. It may be I will like them better when tested for summer use (by myself.)

J. E. WALCHER.

Millersville, Ill., April 7, 1881.

Well, I declare, friend W., I believe your secret is a grand one. Why don't you have it patented, and charge $5.00 for a "family right"?

REPORT FROM THE TENEMENT HIVE.

You ask for reports from old bee-keepers in regard to the wintering of our bees the past winter. Here is mine. Of 6 swarms in Simplicity hives with shavings banked around them, and chaff-cushion divisions, 5 are dead. Of 25 swarms in single chaff hives, I have lost one. Of 104 swarms in tenement hives, I have lost 2. The chaff and tenement hives have consumed less stores than did those in the Simplicity, although they have wintered through, and only one of the Simplicities died.

D. C. UNDERHILL.

Seneca, Lasalle Co., Ill., April 20, 1881.

Although we lost all four in our single tenement hive, I have no doubt but that they will answer as well, or even better, than the chaff hives, if the bees are well prepared in ample time to get well waxed up before winter comes on.

WONDERS WILL NEVER CEASE.

I have a queen 3 years old that produced pure Italian workers until she began breeding this spring, and, to my surprise, she now produces the worst-looking hybrids I ever saw. You may suggest that this is a stray queen. I thought so till I examined her, and knew her both by her looks and strange habit of trying to hide from me when the bees are being examined.

A. S. SMITH.

Atlanta, Ga., April 15, 1881.

Now, friend S., as it would be the most natural thing in the world for a daughter to not only look like her mother, but also to have the very same habit you speak of, I would suggest that you may be mistaken still.

MAKING DARK COMB HONEY LIGHT BY BLEACHING IN THE SUN.

I have been experimenting some in regard to those nice sections of honey, the cappings of which have become soiled by the bees running over them with their "dirty boots" during pumpkin bloom, chestnut bloom, etc., and have succeeded in making them as nice and white as any. I tried sulphur, but it would not bleach it, although smoked for days; but by putting a section in the window in the sun a few days it will be as nice as though it had never been soiled; but be careful, and do not let it get too warm, for the sun shining through glass is apt to cause them to "wilt," as I have found out.

This year I propose to make a rack in the window of my honey-room, with shelves from bottom to top, on which to put all soiled combs, shading from the hot sun; bleach one side, then turn the other. This plan, if practiced, will make a difference of hundreds of dollars in our honey crop, for we expect to get a crop this year.

W. RUGER.

Conklin, Broome Co., N. Y., Apr. 24, 1881.

Friend R., you have struck on a most important matter; and if this succeeds, as I am rather inclined to think it will, at least in a measure, it is going to be of great money value to us. Will those who have comb honey on hand please test and report as soon as they can conveniently? We have a little left, and will try to get at it as soon as the sun shines.

ITALIAN QUEENS TURNING BLACK.

The dollar queen bought of you last fall either died after keeping her two or three months, and her colony raised another, which was nearly black, and this spring lay nothing but drone eggs, or the one I got of you turned black and laid drone eggs. One of the two things happened. I am at a loss to know which.

B. F. PAYNE.

Bridgeport, Harrison Co., W. Va., Apr. 30, 1881.

I can not quite agree with you, friend P. I think a black queen from some stray swarm got into the hive and killed your Italian queen. The reports we have had in the matter seem to indicate that this happens much oftener than we are aware of.

My bees all wintered well, and are doing finely this spring. Fruit-trees are in bloom now.

BOX-ELDER

I see advertised as a great honey-tree. I have one growing in my yard, which blooms every year; is in full bloom at this time, but I have not seen a bee on the tree yet. It may be good in some localities, but I think not here.

WINTERING BEES WITH SECTIONS, ETC.

I wintered the stands of bees on their summer stands, with the caps on, and they are as strong stands as I have had. Very little spring dwindling.

Phillipstown, Ills., Apr. 27, 1881. D. NEWELL.

CELLARS, CHAFF HIVES, ETC.

I had 29 last fall, which all came through safe. I had 19 in the cellar, 10 in chaff hives on their summer stands. Those 10 stands were in a very bleak situation, on ground sloping north-west. I had my boys, as they cleaned out the horse-stable, draw the manure and bank the chaff hives on three sides up to the lids. I think the chaff hives have come through the best, although all the perceptible difference is, their combs and hives are dry. Some of those that were in the cellar were quite damp, and some of their combs were quite moldy, particularly the back end of the frames, lower corner. I put them in the cellar the first week in December; put them out for a purifying fly March 9th, for 24 hours; put them out April 15. At this date they are gathering both honey and pollen, and as many hives as I have looked into have lots of eggs and young brood.

J. T. BEECH.

Burnt River, Ont., Can., April 21, 1881.

No combs should ever become moldy, either by chaff hives or cellar wintering; in the latter case, it indicates imperfect ventilation of the cellar, and with chaff hives, imperfect ventilation above the chaff. The reports of the past winter seem to be rather in favor of cellar wintering, especially where a great number of colonies are kept.

THE JUVENILE CLASS, AND OTHER ITEMS.

My report to May, 1881, is as follows: Prepared for winter Oct. 22, 1880, 49 colonies apparently in good condition on summer stands, with 10 frames below and quilt and chaff cushion top of all except one two-story hive with 10 Gallup frames below and 10 above; the other 48 are L. hives. May 1, 1881, had 47 colonies alive and in good condition. The Gallup-hive colony was rather weak; good queens in all the hives, and building up nicely on fruit-bloom. I am glad to see you put yourself in Blasted Hopes, although I am sorry that you lost so many bees. I would like to see a report from friend Hogarty, of Quindaro, Kansas. One year ago he had 120 colonies; this spring he said he had 5 colonies left, and he has not sold any. He wants to sell out and quit the business. I think the bees in this neighborhood are about two thirds dead this spring. We have had a very hard winter, but my bees were not over 18 days without flying, at any time from Dec., 1880, to March 1, 1881, and they came out this spring in better condition, and stronger, than they did one year ago. I hardly know if it was the fault of the bees, the weather, the mode of preparation, or all combined; but, as Mark Twain or some other philosopher says, "I think it was." May be it was luck; who knows? One question: How do you know that honey will keep good in tin cans sealed tight "one hundred years"? Won't you come down a year or two? Allow me to thank Mrs. Harrison and yourself for so much kindness to the Juvenile Class.

JAS. A. NELSON.

Wyandott, Kansas, May 12, 1881.

You are right about the honey, friend N., for I have never tried it a *full* hundred years, and it might not keep over 99; but then, again, it might keep a thousand. Suppose we label a can or two, and set it away for posterity, and have them report. You must not give me too much credit, friend N., for I expect the Juvenile Department to furnish us very important facts, and some that, perhaps, I could not get the old ones to give. By the bye, young bees a day or two old are of no use as honey-gatherers; but every bee-keeper knows that, with his hives full of such, he will in due time reap a bountiful harvest. When we move off the stage I expect Blue Eyes and the rest to take our places, and the thought of it makes me long to get better acquainted with them all. More than all, friend N., I have a great longing to know that their little feet are already started in wisdom's ways, and, to sum it all up briefly, that they are all Sunday-school scholars.

LEAVING SECTION BOXES ON ALL WINTER.

I have to report bees mostly dead all through this section. I think fully 75 per cent or more have perished during the winter and spring. You made the inquiry if any had left section boxes on, and the result. I use a 1½-story chaff hive, and 5x6 section box. The supers set on the top of the hive; the boxes on top of the frames; chaff all round, about 2 inches on top. When I took off the boxes, I left 2 to experiment—one old, the other a young swarm, both Italians, and both are living, and among my best now. I have 16 living; lost 50 per cent. N. CASE.

Orangeville, N. Y., May 14, 1881.

I confess there is something very perplexing to me in these reports. Is it really a fact, that there is some very important point in regard to wintering, of which we are in ignorance?

BEES BY THE POUND.

If you will furnish the cages all provisioned, I will send you bees at 75 cts. per lb., you paying express charges. If you do not want bees, I will furnish your customers at same rates. You must send cages prepaid. A. T. McILWAIN.

Abbeville C. H., S. C., May 7, 1881.

I fear it is too far for us, friend M., but there are doubtless many of our customers who will be very glad indeed to accept your offer. We will mail you a cage all prepared to-day, and you can try 1 lb., and we can then tell some thing about what the express will be.

FASTENING FDN. IN FRAMES.

I have just invented a new plan for fastening fdn. in sections and frames. Take a tin tube about the size and shape of the one in the cold-blast smoker, with a very small hole in the little end. Put the tube, little end down, into a cup of melted wax; then put your thumb over the large end, and take the tube out. Your thumb will keep the wax from running out. Take your thumb off whilst you draw the tube along, letting it touch the wood and wax where they are to be joined, and the small stream will stick it nicely. This may be old to you, but I think it is a good plan, at any rate.

Greeneville, Tenn., May 16, '81. CHAS. KINGSLEY.

Your idea is quite ingenious indeed, friend K.; but since the Parker fastener, and the advent of rubbing the wax sheets fast where we want them, the melted-wax plan has been mostly discarded. Thanks for it nevertheless. It strikes me, on the impulse of the moment, that you have given us an idea for our wax-fountain, in getting the right amount for a sheet on the rubber plates.

CHAFF PACKING.

I think it is my turn to recite next. I put into winter-quarters seven good swarms and one weak one. This spring I have eight what I would call extra good ones. I lost none. They kept up brood-rearing more or less all winter. They increase in numbers instead of decreasing. I will give my mode of wintering and springing. I use the shallow-frame Langstroth hive. I make a rough box, about 4 inches larger all around than my hive, and about 8 inches higher, and a good cover to keep the water out. From one side of the box I saw a hole about as large as the front of the hive; put a few inches of chaff in the box; set in the hive, the front thereof to correspond with the hole in the box. Pack chaff on three sides and on top. I leave the quilt on all to cover the frames. My hives face the south in winter.

PREPARING FOR WINTER.

I like to have plenty of young bees to go into winter-quarters with, and so as soon as the honey season is over, and brood-rearing ceases, I stimulate the queen by feeding syrup and flour made into a batter, and spread on a comb and hung in the hive. I repeat about every week until cold weather comes, and before packing in the fall I see that all have plenty of good sealed honey to winter on. When spring opens I stimulate the queen the same as in the fall, for I want my hives crowded with bees and honey by the 15th of May at least, so they will be ready to work in boxes as soon as white clover makes its appearence. The man who gets the honey is the man who is ready with his bees when the honey is ready for him. If the weather is favorable, I think I shall get a little surplus from apple-blossoms this season. I have not lost a swarm for two winters; but my good luck does not depend on my own skill alone. Last fall I dreaded the approach of winter, and prayed that my pets might winter safely. My prayers were answered. I always bear in mind the following passages: "*Ask*, and it shall be given unto you." "God will help those who help themselves." H. Alfred.

Lordstown, Trumbull Co., O., May 7, 1881.

Notes and Queries.

TO-DAY I have 67 hives with bees, 58 averaging some brood in 4 frames, and 9 having a little patch of brood, in one or two frames.

Marengo, Ill., May 14, 1881. C. C. Miller.

NEW HONEY AND A GOOD PRICE.

I hope the honey tumblers will be in soon, for I have honey to fill them aready, and engaged at 16⅔ cts. per lb. E. J. Atchley.

Lancaster, Tex., Apr. 22, 1881.

At a meeting of the Southern Mich. Bee-keepers' Association, held in this city the 11th inst., 39 reported on hand last fall, 771 colonies; on hand May 11, 325. B. Salisbury, Sec.

Battle Creek, Mich., May 13, 1881.

BURYING BEES.

I bury my bees as we do potatoes, and have for 3 years past, and lost 25 per cent. Also H. D. Mason lost 15 per cent of those buried. S. H. Corbin.

Fabius, N. Y., May 1, 1881.

APRIL SWARMING IN OREGON.

I had one fine swarm of bees come out April 21. They are doing finely. Expect more in a day or two. A. J. Brumbaugh.

Cottage Grove, Lane Co., Oregon, April 23, 1881.

I have to-day finished taking my bees out of the cellar. They have been in 158 days without a fly; put in 137 swarms, and set out 130 in good condition. There has been great loss of bees in this section the past winter. N. F. Case.

Glensdale, N. Y., Apr. 27, 1881.

FLORIDA.

Our bees are gathering honey in large quantities from the lime, bananas, and oranges, and we think it beats the white clover in flavor. It does not look so white. It is not only ourselves who think so, but strangers who visit our tropical island. C. A. de Louo.

Key West, Monroe Co., Fla., Apr. 12, 1881.

I have lost 30 swarms out of 55. I am the only one around who has any left; one of my neighbors has lost 58, all he had. I want to find, through Gleanings, where I can procure a dozen nuclei *Italians*. Levi H. Baldwin.

Hingham, Sheb. Co., Wis., Apr. 18, 1881.

OPEN-AIR FEEDING.

I am feeding sugar syrup in the open air; feed as much as 12 or 15 gallons at a feeding. It is a success. I have *now* no bees in the neighborhood to interfere. I can furnish you a few million Simpson plants at 10c per hundred if you fall short. Spider plants and catnip same price. H. R. Boardman.

East Townsend, O., May 4, 1881.

NEW HONEY BY THE TON.

I commenced this spring with 132 colonies; have increased to 146, and have taken to date 5760 lbs. ex. honey, with about 600 lbs. more to come out next week. I have had between 40 and 50 natural swarms, all of which I returned except 14 that would not remain in parent hive after cutting out queen-cells. If I get as much honey per hive as I got in 1879, I will close the season with 14,400 lbs. J. D. Bedell.

Franklin, St Mary Par., La., Apr. 24, 1881.

CELLAR WINTERING.

Mr. C. R. Miles, of Pawnee City, Neb., says, "I tell you, the cellar is the place to winter bees, and no more words about it." I indorse every word of that: it is a whole sermon in a nut-shell.

Erie City, Pa., May 8, 1881. C. H. Fronce.

DRONE COMB ON FLAT-BOTTOMED WORKER FDN.

I find that the bees disregard the cell foundations in the *flat bottomed* wired fdn., for in some sheets I find that they built up the greater part with *drone* cells, though the fdn. was for *worker* cells.

Louis Knorr, M. D.

Savannah, Ga., April 30, 1881.

HIVES UP ON BENCHES.

Two-thirds of the bees in this section are *non est.* I have lost but 3 colonies out of 8; wintered on summer stands. My neighbor's bees sat on high benches, while mine are placed close to the ground, and were buried in snow, to which I attribute my better success. J. P. Swarthout.

Crystal Springs, Yates Co., N. Y., Apr. 20, 1881.

In regard to bee-keeping, I would report that I purchased two Italian colonies from L. C. Root in May, 1880; increased them to 8, and have wintered them without loss; also 4 black swarms bought last fall. Wintered in cellar, with occasional fires in coldest weather. At least 50 per cent of the bees in this county are dead. S. Markwick

Ox Bow, Jefferson Co., N. Y., May 13, 1881.

FOUL BROOD IN UTAH, ETC.

Our bees have wintered well on summer stands in Salt Lake Co., Utah. We did well with bees last summer. They stored much honey, and have considerable bees and brood now. Some are swarming naturally at this date. We expect to have a good season for bees, from the present appearance of the times. I am the County Bee Inspector of foul brood, and there is considerable less of it now. I did not meet with any person last season, 1880, but was willing to destroy all the bees and hives that I found infected, by burning them up. Geo. B. Bailey.

Mill Creek, Utah, May 10, 1881.

ONIONS VERSUS BEES.

My bees are all dead, but don't you say a word, and I will make it all O. K. I am going to raise onions this year, or at least make a trial.

J. Patterson Watt.

Duck Creek, Mercer Co., Ill., Apr. 12, 1881.

[Well, if you really insist on it, friend P., of course I won't say a word about it; but I can not help thinking (all to myself, you know) that may be you will have as much trouble with onions as the young man did who lived near Mr. Merrybanks. Don't you think you had better have a few bees just for old associations' sake?]

RAISING BEES.

What is the best way to raise *bees*—by dividing them and giving them good queens, or by leaving them in strong colonies? J. H. BURRAGE.

Concord, N. C., May 4, 1881.

[I think, if not carried to too great an extreme, you can raise more bees by having all strong colonies; that is, one good prolific queen, with a good hive full of bees, will raise more brood than the same quantity of bees would with two good queens. During very warm weather, of course not as many bees are needed to care for the same quantity of brood.]

Bees are doing well, and there is a good prospect for a first-rate season. First swarm of bees March 22d. I have had a tussel with foul brood. I think that it is first started by chilled brood.

Los Angeles, Cal., April 9, 1881. W. W. BLISS.

BOX HIVES VERSUS SIMPLICITY FOR WINTERING.

I went into winter-quarters with 16 box hives and 14 Simplicity. I have now 8 box hives left and one Simplicity. A. L. CLARK.

Buffalo Plains, N. Y., April 11, 1881.

[This report might at first seem to indicate the box hives the better for wintering, and I should not be much surprised if such were the case; but if I am not mistaken, the former were old and well gummed up, and the bees on old tough combs, while the Simplicities had new swarms, or artificial colonies, mostly, if not all, on new combs. This alone makes a vast difference. I do not think I would risk either kind of hive outdoors without protection.]

Please send me a five-cent paper of Vilmorin's improved dandelion seed. I want them for greens, and to remind me of the "long ago." I have not seen a dandelion since I left my native State, New York. None grow in this part of California.

MRS. MAY C. STOWELL.

San Rafael, Marin Co., Cal., May 9, 1881.

[Our Vilmorins, at this date, May 17, are a sight, I tell you, but the bees are so busily at work on apple-bloom they do not notice them much now. If a dandelion blossom were not such a very common sight, these great yellow blossoms might rank fairly with our dahlias and yellow roses. We hope the greens and blossoms may flourish abundantly in your land of gold, my friend.]

Reports Encouraging.

LIKE friend Martin, I have been visiting some of my brother bee-keepers. The first call that I made was on W. R. Bohannon. I found his bees all alive (19 cols.), and in good trim, and himself a good subject for the Smilery. He says, "Tell R. H. Mellen, of page 24, Jan. No., that I am a near relative of Merrybanks', but I am not so robust as friend M., because I have not been a bee-keeper so long," but, like friend M., he uses very large boxes and abundance of chaff in packing his bees, and that he has never lost a colony, and thinks that he will not so long as he follows that plan of packing. I think myself that friend Mellen was a little hard on Mr. Merrybanks and his connection in his article on wintering bees, and that he gave only one side of the subject, and not a very good display at that. I will admit, that bees would winter in a dark cellar (if at all) on less honey than they would above ground; but how is it about depriving them of the benefit of God's glorious light for four long months? Don't you think that it would be an act of mercy to winter them where they could have the benefit of a promenade on those mild sunny days that we sometimes have in winter, and that it would pay well for the extra honey that they would consume? In regard to the beauty of the bee-yard, it does not look so nice when prepared for winter as it does in June, when he has it all spruced up; but it has at least a look of comfort in place of the desolation when bees have all been removed to the cellar. S. H. LANE.

Whitestown, Boone Co., Ind., Apr. 20, 1881.

The L'Hommedieu Bros. have had their usual success in wintering their bees. Cellared Nov. 9; set them out April 15 and 16; 4 dead, 1 queenless; sold 2, which leaves us 71 colonies to date.

D. E. & F. J. L'HOMMEDIEU.

Colo, Story Co., Iowa, May 4, 1881.

I wintered 16 colonies in chaff hives of my own get up, without any loss; I now have from 5 to 8 cards of brood in my hives. I never saw bees build up so fast. I should like to exchange some bees by the pound for good queens. A part of my bees are Italians and part hybrids. A. H. SQUIRE.

Nicholville, N. Y., May 12, 1881.

I went into winter-quarters with four strong colonies, and they are all—no, not dead, but just the *livest* colonies in all the country round; and I think it is all owing to watchful care last fall, all through winter, this spring, and all of the time. You see, I am a new hand, and have not got careless yet.

M. M. FAY.

Council Bluffs, Potta. Co., Iowa, April 16, 1881.

The average loss among the bees, I should judge, in Southern Minnesota is 50 per cent. I am one of the lucky ones; wintered 23 hives of Italians in cellar under my living-room, without a single loss. Confined 5 months lacking 2 days; add to this time 10 days without a fly before placing in cellar, and you have 5 months and 8 days without a fly. All came through finely, and are now breeding well.

F. A. TICKNOR.

Austin, Minn., April 29, 1881.

REPORT FOR 1881.

Went into winter with 84 colonies; come out with 82; some of them were weak in the fall. Prepared, or, rather, unprepared, as follows; I took the section boxes off in October; left the honey-boards on; they are ⅛ of an inch thick, with 18 1¼-inch holes in them. I spread a cloth over the honey-board, and set a box of chaff on top. The brood-chamber was left just as I ran them for honey. I would have contracted the brood-chamber, but the cold crossed me out. I had 4 colonies queenless. I wintered 88 queens; that gave me 4 queens to supply the 4 colonies with. The 4 hives that I had the queens in I gave in this as 4 hives. They contained 8 queens. I took out 4 queens and united them. They were wintered on summer stands, with no protection but chaff on top. I will start this spring, if I lose no more, with 79 colonies. My report is 82, but I have sold three colonies. RUFUS ROBINSON.

Iola, Clay Co., Ill., May 7, 1881.

OUR OWN APIARY.

MAY 10*th*.—Although fruit-trees are not yet in bloom, we have, for nearly two weeks past, had quite a flow of light-colored honey. I have been a good deal puzzled to tell where it came from. Very likely it is from dandelions, early cherries, and soft and hard maple—principally from the latter, I am inclined to think. We have been transferring right along, and the bees build combs and fasten them into frames just about as well as during fruit-bloom. We have about 40 colonies now, and more are coming every few days. Yesterday we sold about $35.00 worth of bees and queens from the 40 colonies, and they were still working very fairly before 6 o'clock this morning. Selling bees by the pound is proving to be a great success, and a great blessing—this spring especially. A great many are now keeping bees who are professional men, or men in business. Well, these men have nice hives, nicely arranged on their grounds, and they are just as nicely arranged now as they were last fall, except that the hives have no bees in them. They do not want any more hives nor any more combs; neither do they want to buy bees in box hives, and undertake the troublesome job of transferring, as professional bee-men do. What shall they do to get going again, without any trouble or bother except to hand over the money? Simply buy one, two, or three lbs. of bees with a queen, turn them loose at the entrance of their hives in May, and the work is done. In fact, the bees can be put in the hive within five minutes after getting them from the express office, and in an hour you will have a nice working colony. With the tunnel described in the August number last year, the task of putting up a pound of bees and queen is but a little more than letting them out. Go to any good stock, and raise the combs until you find the queen. Place the frame she is on off a little to one side, and then proceed to shake the bees from the remaining combs. You will get a pound without trouble, by shaking a few from each comb; but if you wish to get 2 lbs. or more, or many bees are in the fields, you may need to brush all the bees off; and the very best implement for this purpose we have ever found is the California yucca brush on our 5c counter. A bunch of grass is always letting blades slip out, which drop into the hives and bother the bees to get them out. Asparagus tops are but little better, and almost any kind of a brush broom will hurt the soft young bees. If you have no assistant to hold the tunnel, lean it against the hive, holding it with your knee. This idea I got from neighbor H. While Favorite scales are by far the handiest, almost any scale will do to weigh the bees. The 10-cent scale will do very well if used with a little care. Weigh your cage first, and then make a mark with your pencil where the index should stand. Set the cage near the entrance, with the tunnel in the top of it, as explained. You will soon be able to tell when you have about enough, and you can then shake it while on the scale until enough fly out to have the index just right. Now put on the cap; but before fastening it with tacks, put the queen carefully under one corner. You can then tell your customer you know she was in, for you put her in the very last thing *yourself*.

We often hear of a single colony of bees furnishing $25.00 worth of honey, and it is my opinion that a good colony and queen, worked for bees, would give full as much, if not more, and the demand now for bees by the pound is far in excess of any demand I ever knew for honey. We have already sold bees and queens from single hives to the amount of over $10.00, and they are fair colonies yet, and the season is before them. Wake up, boys, and do good and get paid for it.

May 24th.—Well, I tell you, my friends, we have had a busy time during the past two weeks. Bees have come in by the wagon-load, besides what the friends have sent in by express, and they have gone out, too, by the wagon-load. All orders have been filled pretty well, except for dollar queens and pounds of bees, and for black queens and pounds of their bees. This latter feature a little surprises me. In putting black and hybrid queens into our price list, I did it, remarking we could supply the demand only when we happened to have them; but this spring, it would have required an apiary run for each to supply the call. I presume it has been owing to the anxiety to get bees on the empty combs, and because these are so much cheaper. Well, to fill this demand I purchased 34 box hives of blacks. Ernest, John, neighbor H., and myself, all went into the task of transferring. They are all done but 10. Said I to my wife at supper,—

"I do not believe I will ever buy any more box hives of bees at any price."

"Why, my dear husband, how can we believe you? You have said the same thing almost every year ever since you have had bees, and yet you always keep buying them whenever anybody offers you any."

"I tell you what, pa," said Ernest, "I would not take any more of the pesky mean things as a gift. The combs are all twisted and crooked, and full of holes, and the greater part of them nasty and black, and good for nothing. Then the bees tumble right off their combs, scatter around and get stepped on. They won't defend themselves from either robbers or moth worms, nor do any thing else but crawl up a body's trousers legs and sting. One of the Italian stocks that you get of Rice or Dean is worth a whole half-dozen box hives, and I am sure you lost money on them, even if you did get them for $4.00 apiece."

"Gently, my boy; you know we filled orders by buying them."

"Well, I wouldn't have any such orders. I wouldn't advertise them."

I think Ernest is about right, my friends; but for all that, I like to furnish what the people ask for. Perhaps I might remark, these black stocks were all wintered in a cellar. The owner is to have the old hives back again, and he says he is going to put more bees in them. If I were going to buy them, I would furnish him frames of fdn. almost free of charge, to save another such an awful muss and waste, as the one we have had. In fact, we are not through with it yet, for the bees rob so awfully, in spite of tents, comb-baskets, and every thing else, we shall have to give it up until the locusts bloom. We can get a hive transferred, it is true, but the robbers will pile on to it at such a rate (black robbers too, mind you), that we have to leave a tent on it all day, or until they lick up the honey. Pounds of bees lie dead in front of the hives; three colonies have been robbed so badly that they swarmed out, and two queens have been found dead in front of the hives, on account of robbers. H. found one runaway swarm on top of a grapevine stake, and shook them into a cage after finding the queen, and thus filled one order without shaking these off the combs at all.

Now for the Italians: We have transferred nearly a hundred, from combs of different sizes, but have never had a bit of trouble. The bees stay on their combs, and when there is loose honey around, they lose no time in licking it up, and putting in the proper cells in a neat and tidy way. No holes are found in their combs, made by digging out moth worms all the time, for they do not allow any such work to commence with. My friends, what would you take to go back to box hives and black bees?

SOME HINTS ABOUT QUEEN-REARING, AND SELLING BEES BY THE POUND.

When you shake nearly all of the bees from a hive or nucleus, you often leave too few to care for the brood, and it may starve, if not provided for. Well, in such a case, think if you have not some colony raising queen-cells or the like, that could take care of the comb, and be greatly benefited by it. We can almost always dispose of a dozen combs of brood to excellent advantage in this way, for one good queen can almost always lay eggs for two or three ordinary colonies. The way neighbor H. manages to raise so many queens, and keep his whole apiary strong all the time, is by making one queen lay eggs for several hives. Find a queen that will bear it, and then give her an empty comb just long enough to have it filled fairly with eggs, and then put it in your colony that is raising cells, waiting for a queen to be fertilized, or that, from any other reason, has not eggs and unsealed larvæ. You will often see the bees raise a hum of rejoicing, just at the sight of some thing to work at. Do not let a colony be idle, even one day. I know it takes brains to do this, and careful thoughtfulness; but if you can not command this, you must be content to be a—small bee-keeper. Another thing: We are introducing queens daily that we have purchased. Well, sometimes when we have not places for them all, we introduce a queen to a colony having one or more queen-cells. Now, strange to tell, a laying queen will often go to work and lay the combs full of eggs without even stopping to tear down the cells at all. Well, we take her out with a pound of bees, and the cells then hatch out just as well as if she had not been there. You see, we got the hive replenished with eggs, without losing a bit of time, and the queen could just as well be doing this as waiting caged up in the office for a customer.

INTRODUCING WITH THE PEET CAGE.

At my first attempt, the bees dug a hole in the combs under one side of the cage, and killed her. Ernest was going to denounce the cage pretty vehemently at this, but I told him this was a very fair illustration of how we often judge uncharitably. Had I lost a half-dozen right along, with the mass of evidence in favor of the plan, I should have said I was wrong, and the rest were right. Since then, I believe we have lost none. When queens are received that are feeble, the idea of caging them right on a brood comb of new honey is a grand advance. If any thing will bring a queen up, this will. Another point: We can put the queen right into the hive, at the same operation of taking another out. Now, there is one point I wish to impress upon you. Neither this cage nor any other has any particular virtues in making the bees good-natured (unless it is that we don't have to open the hive so much, let in robbers, etc.), but the real facts of the case seem to be, that, the greater part of the time, the queens would be received if let right out, without any cage. I took seven queens into the apiary, and turned six of them loose, one after the other, and not one was molested. They were all given to hives that had built queen-cells, and had no unsealed brood. The seventh would not take theirs at all, nor would they after I had tried her daily for nearly a week. They were cross hybrids, and killed her at last. If you are going into the queen business, you will save a great deal by having no hybrids at all. Neighbor Rice says he has no cross bees in his yard, and, what is more, he *won't* have any.

THE QUINBY SMOKER, WITH BOTH DIRECT AND COLD BLAST.

One of these has been in use in our apiary for some time, and at first the boys were sure the direct-draft arrangement was a great advantage over the usual cold-blast Simplicity. With stubborn fuel, a direct draft is without question an advantage; but with a wagon-load of fine rotten wood, such as we keep constantly in stock, I find our own smoker much the handiest for *me*, for I can light it with a match, and have my hybrids all driven down out of the way, long before the boys have got any smoke at all from the Quinby or Bingham. Of course, you are not all like myself. The Quinby smoker has a most excellent bellows, and is an excellent smoker in every respect.

ROBBING, HOW TO CIRCUMVENT.

After transferring, the bees would often pile on to the entrance so there was no such thing as defending it, and closing the hive during a hot day would be fatal to the inmates. One of our mosquito-bar tents, set over the hives, fixes it in a minute, and the transferred ones have all the air they need, and they can cluster outside, or go in and repair the broken combs, in perfect peace, as they choose, while the robbers buzz about inside the tent, and are prevented from doing harm elsewhere.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

I AM very sorry to be obliged to request to be put at the foot of the list of Blasted Hopes, and to ask thee to draw a new cut especially for me. I have been in the business 8 years; packed last fall 83 stands for winter; thought all right; 45 were Italians, rest hybrids, 2 blacks only. I saved 2 Italians, 2 blacks, 11 hybrids; 15 out of 83, and 3 of them only a handful. The queen I got of thee last spring is all right, and one of the 3-pound boxes I got is alive yet, but very weak. I had a debt of $600.00 hanging over me; I thought perhaps I could get rid of it if I had good luck with bees, and invested every dollar I could spare in fixing up to handle bees; but, oh dear! But I don't intend giving up yet. I will try a few more as soon as they can be had by the pound, so I think I can stand it. I have about 25 lbs. of fdn. that I got last spring of A. I. Root, and plenty of comb; so I will send my wax and get some bees and queens. Where can I do the best? How is it with thee, brother Root? Can I get a few of thee to start again? OLD CURLEY.

New Sharon, Iowa, April 9, 1881.

Now, friend "Curly," I want to protest a little. You invested a good deal of money, you say, with the idea of getting that $600.00 paid up. You bought bees by the pound of me, as I understand it. Now, why did you not *raise* your bees instead of buying them? Neighbor H. has raised his whole apiary from a single stock, and never bought a pound of bees in his life. He has sold a good many, though. You speak of buying bees now. What for, I want to know? Build up those 15, and raise bees to sell rather. If you don't want hybrids, buy one pure queen, if you have none, and then raise the rest yourself. Your hybrids, it would seem from your report, wintered far better than the others. Why not keep hybrids? It begins to almost seem to me, boys, that God is punishing us for our extravagance, and I do not know but I need the lesson as much as any of you. Folks who have plenty of money in the bank, and keep bees only for fun, can afford to buy quantities of bees and high-priced queens, even when they have very good ones already; but, friend C., I do not believe you and I can afford to do so; we are both of us in debt.

Bees are nearly all dead in this part of Wisconsin. I have lost from 56 last fall, to 9 at the present time; and I do not know of any more than one man here who is coming out any better. If not, blasted, I am *certainly busted.* A. A. WINSLOW.

New Holstein, Calumet Co., Wis., May 2, 1881.

Whenever my time for GLEANINGS expires, please stop the paper. I must catch my breath first after such a disastrous winter on bees. ROBT. M. WEIR.

Bloomington, Ind., May 17, 1881.

I have the promise of 2 or 3 weak stocks of bees to start up business. D. P. LANE.

Koshkonong, Wis., April 13, 1881.

Pretty cool, for one of our old veterans, is it not, friend Lane?

I have spent $55.00 for bees, and have lost all. Now I want a paper of Spider-plant seed, as the honey can be dipped from the flowers with a spoon. You see, I will just gather my honey independently of bees. MRS. M. J. MACQUITHY.

Louisville, Ky., Apr. 25, 1881.

THE DWINDLING.

I have lost 42 swarms out of 63, which leaves me only 21. I never had bees "melt" away before; for it seemed as though they melted. Swarms that seemed strong six weeks ago are all gone. Spring dwindling is the cause, I suppose.

R. RATHBUN.

Millington, Tuscola Co., Mich., Apr. 25, 1881.

Ladies' Department.

SWARMING OUT IN SPRING.

BEES have had a hard time this winter. Many persons have lost all they had. Father had 19 swarms last fall. Only 7 are alive now. The imported queen he got of you last fall is all right. We had a hard winter — 100 days of good sleighing. Yesterday, as father was walking through his apiary, he discovered a cluster of bees on the top of the hive. On examination he found a queen there. He caged her and opened the hive, and put her back. He wants to know why she came out, having plenty of honey and some brood. ALICE HUMPHREY.

Redfield, Dallas Co., Iowa., Apr. 18, 1881.

I think it was a case of absconding, friend Alice. The bees got dissatisfied with some thing, perhaps because they were weak in numbers, and, as poor human beings sometimes do, tried to better their condition by "jumping out of the frying-pan into the fire." After flying around awhile, and finding no comfort out of doors, they likely went back and clustered on their old home, as you found them. When we find such a cluster, it is always well to be sure where they belong. If it did not happen that they clustered on their own hive, and such is often the case, your father may have made mischief by putting them in where he did.

A FURTHER REPORT FROM THE WILKINS SISTERS.

On the ninth of March last, we had lost but 2 out of 55. We then expected to lose no more, having given our bees a thorough examination and putting to rights, and found them in much better shape than we had anticipated. Our answers to inquiries at this time, and for two weeks later, were to this effect, so that I suppose we are responsible, though innocently so, for the erroneous statement in circulation. [See page 226 of last month's journal. — *Ed.*] We have now lost *nine* colonies, and have united others until we have reduced our number from 55 to 40. *These* we expect to keep We have had no acquaintance whatever with spring dwindling in previous years, nor had we ever before lost a colony in wintering. I trust this may reach you in time to prevent any undeserved credit being given us in GLEANINGS for May. LUCY A. WILKINS.

Farwell, Mich., Apr. 22, 1881.

Many thanks, my friends, for correcting the mistake the newspapers were innocently making; I heartily wish our own sex were all as ready to correct any undeserved credit the world might happen to give them.

Our Homes.

I will instruct thee and teach thee in the way which thou shalt go: I will guide thee with mine eye.—PSALM 32: 8.

OUR friends will remember that we were considering, last month, a letter from friend Leonard. Toward the opening of the letter he makes this remark:—

"I do not care how much you mix your business up with your religion; it is none of my business, any more than if you should mix salt with your tea for breakfast. What concerns me is, are you an honest man, and trying to do to others as you would like to be done by?"

If I am correct, this is the great question that most of us care about. Is he who presumes or undertakes to teach, thoroughly honest? In fact, this question comes up to me again and again; and as I weigh opinions of one great mind after another, I fall to wondering how many of them are thoroughly honest. Yes, even in talking with and listening to ministers, I ask this same question. How much of what we hear or read is there that has not underneath it all some thing that we do not know all about? I don't mean to allude to those who have a deliberate purpose of cheating, but only to the involuntary (as it were) deception that seems to well up from the heart, almost without poor humanity being for the time aware or it.

The heart is desperately wicked, and deceitful above all things: who can know it?—JER. 17: 19.

After all that has been said about honesty of purpose, it seems to me now there is no commodity in the world so eagerly sought for and so highly prized, as a wide-awake honest boy or girl, woman or man. Everybody rushes for him, and everybody wants him. It was his simple honesty that gave Abraham Lincoln the large place in the hearts of the people that almost no other man has had since the days of Washington.

One particular point strikes me strangely and almost painfully, illustrating strongly the great need of a purer honesty of purpose than the world often finds. It is words just like yours, friend L., commending me for my honesty. I do not deserve it, and if the world at large make such bungling work of trying to be honest as I do, I tell you the state of affairs is bad indeed. At the time of my conversion, I promised God on my knees I would try to be honest and true to him and my fellow-men, no matter what consequences came from so doing, and I have been trying to remember this ever since; but it is with sadness I reflect that much of the time it has been too much by fits and starts, instead of a constant, steady purpose. Before this change of heart, or change of purpose, if you choose to call it so, I had been so much in the habit of making excuses and giving reasons that were not strictly facts, that it required a most powerful effort to break away from the habit. While the words were on my lips, I would sometimes remember, "thou, God, seest me," and stop abruptly, or change the conversation in a way that might have puzzled my hearer, and often sadly embarrassed myself; but God heard and approved. To my astonishment, it seemed as if men, too, heard and approved. I have been wondering whether there were not intimate friends of mine who knew this weakness, and saw the struggles I was making to overcome it. My friends, all the arguments that were ever written in defense of the truths of the Bible are not as powerful to the eyes and ears of the world as the sight of a weak sinner fighting his way up to God in the way I have mentioned. The world pays a high premium for such work. It gives every such soul more credit than it deserves. Now, mind you right here that you will get no such credit if your inspiring motive is to earn the applause of men: it must be to win the approval of the God who made you. Your prayer must be like that of David,—

Create in me a clean heart, O God; and renew a right spirit within me.—PSALM 51: 10.

Many of you know with what pleasure we receive some new discovery, or some new unlooked-for feature or help in bee culture. Well, my friends, there are new truths that open up and develop, just in the same way, to one who is striving to be freed from sin. I want to tell you of an experience of the past year. Almost every one knows what it is to have wrong thoughts and feelings intrude themselves, and at times, too, when you are almost sure they came entirely uninvited. You can see no reason why they should intrude their hideous forms at all. Old temptations of years gone by suddenly force themselves into your mind, and you regard them more with surprise and curiosity, at first, than any thing else. Could it really be that you ever in life harbored any thing so vile? I knew these thoughts were wrong and dangerous, and I first knelt in prayer, to have God keep me from temptation. By and by they trooped back again. I took to praying wherever I was, and in a few months I was so used to saying to myself, or aloud if no one was near, "Lord, help," that it began to come involuntarily. While in the street, if any thing happened to even remotely suggest the dangerous ground, "Lord, help," rang out sharp and clear, before I had even time to see why the signal of danger was sounded. After a little thought, I saw clearly what it was—well, let us say *suggested* the thought, that danger was coming. Is this not wonderful? and is it not glorious to think that God will, in time, as a reward for faithfulness, send along, as it were, an ever-present monitor? I do not know but you, friend L., and some of the rest, may say I am going crazy; but I think I can dispel that idea by what follows. A few weeks ago, I think it was not more than that, there came a temptation to make an excuse that was not quite an honest one, and, to my surprise, sharp and clear came the little warning, "Lord, help," to warn me of dangerous ground in *that* direction, as well as improper thoughts. The warning has come here once this morning since I sat down to write. Now mind you, it is like the alarm clock I talked to you about a few weeks ago. It will be of no avail, and in fact it will never be heard, unless I jump to action in a moment, and heed its prompt warning. Should I once ignore its call, and go right on in what I was tempted to do, its voice would, in all probability, be fainter, and finally stilled. If, on the other hand, I look and listen for it, and recognize it truly as being the voice of Him whose hands and feet were cruelly lacerated by the nails of the cross, my life will be nearer to him day by day, and new and brighter will be the experiences, until death opens the golden gates, and—

"I shall be with him there."

Does not the Bible promise some thing like I have mentioned? See:—

He shall give his angels charge over thee, to keep thee in all thy ways.—Psalm 91 : 11.

There is something about this little warning voice, commencing to take up the office of warning against any kind of sin, that reminds me of a little incident of our home life. "Caddy," our youngest, is very much inclined to be boisterous during the minute devoted to asking a blessing at the table, and so we have been accustomed to ask her to fold her hands during the simple service. You see, if her hands were folded, and kept so, she could not very well get up a "clatter" with her little knife, fork, and spoon. Well, for the first time in her life she went with her mother and sisters to some sort of an ice-cream festival in the public square. They sat at a little table by themselves, and after the dishes were set before them, during a momentary pause there was a movement of the little hands to clasp them in the accustomed way, while she glanced about to see who was going to ask the blessing in papa's absence. It was the force of habit and education, in her case, as well as with the warning voice of conscience I have been telling you about. She had been obedient, just as I had, and when the circumstances were changed, the force of former training would carry us both safely still.

Now a word in regard to business matters. The greater part of you know me so well that you will not take my words amiss. Will such extreme honesty starve a man? Of course, you all know it won't. He who strives to be honest before God, will surely be honest before men; and if I heed this little warning voice, my business will continue to build up until it reaches the uttermost corners of the earth, for it will be in God's hands, and he will be responsible for it.

I used to have trouble in borrowing money when I needed it, or thought I needed it; now I am asked to take people's money, as a favor to them; this, too, when I have only half fought these battles as I might have done. Instead of giving me credit for what you have seen of me that you approve, give the credit to the book that teaches,—

Blessed are the pure in heart, for they shall see God.—Matt. 5:8.

Will our friends please turn to the letter on page 250 of our May No., to which this is the answer?

I have just read both chapters you refer to, friend L.; in fact, I used to wonder, as you do, why such chapters were put into the Bible. When I first noticed them, as they troubled me some, I concluded I would drop them until I got a little older in Bible lore, or until God saw fit to make it plainer to me. May I take the liberty to suggest right here, that it is hardly wise to speak as you do, in saying you *know* a thing is or is not so? The best-educated men I have ever met were very slow to make positive statements in regard to what they *knew*. If we wish to have our opinions considered of importance, should we not all be very careful in saying we *know*, especially in regard to matters on which even wise and good men differ? The chapter in Genesis is one that would especially stamp the Bible as a *truthful* narration, because it tells the bad as faithfully as the good. Had all these characters been pictured as pure and upright, we should have been discouraged in attempting to follow them. If you will look closely, you will see that the Bible nowhere indorses such sins, but only gives a history of them as they occurred. Every page so plainly exhorts to purity and uprightness, that no one can possibly mistake the tenor of the book as a whole. You would say, living in this enlightened age, that such portions should have been omitted from the book. Those who have labored hardest for the suppression of crime, and who have, as it were, had the greatest hand-to-hand conflicts with sin, decide, I think, with one voice, that the Bible, as it is, is *the best book* to give one who wishes to reform. Again, how could we have ever admired the character of Joseph as we do, and how could we have given him proper credit for his crowning act in life, did we not know how common was the sin of licentiousness all around and about him?

The psalm you refer to (109th), is called, I believe, one of the "imprecatory" psalms. At first glance, David would seem to be praying that God would send curses on his enemies; but if you read it through carefully you will find, I think, that he alludes to the enemies of God, justice, and right. The keepers of saloons and gambling-houses are, in one sense, your enemies and mine. Would you want to pray that they might prosper in their work of ruin? A few days ago, one of our boys was enticed to drink; and as often as we would get him back, some of the saloon-keepers' allies would waylay him and get him intoxicated again. I asked the question of a friend, how it was possible that any one knowing him could have the heart to hold the bottle to his lips, and why they should work so hard to accomplish his ruin. The reply was, that they had no particular spite against him, but it was their hatred of our institution, and the Sunday-school and reform work connected with it. They have not only an enmity against my poor self, but against God. Please, now, read the chapter, keeping this class in view, and I think you will find it not far from the sentiment you would indorse toward them. See—

They compassed me about also with words of hatred; and fought against me without a cause.

And again,—

Let them curse, but bless thou: when they arise, let them be ashamed; but let thy servant rejoice.

> Let mine adversaries be clothed with shame; and let them cover themselves with their own confusion as with a mantle.

If a man steadily devote himself to the task of getting boys to drink, and procuring it for them, and as years pass on there seems to be no hope of his doing any better, would it not be a real mercy to the world if he were under the sod in the churchyard? and if his children are to be brought up in the same way, which they will in all probability, will it not be better that they should be cut off in infancy, and thus spare the world their sad history of crime? This you see would give us—

> Let his posterity be cut off; and in the generation following let their name be blotted out.

I am very glad indeed, friend L., that you were pleased with my mild answer, although I have no recollection of it at all now. I presume I did it in response to the spirit that Christ has so plainly taught, and because I was trying to follow in his footsteps, and not because of any virtue in myself. I have fought many hard battles before I could give such answers as you mention. May I not ask you to give him, my teacher, the praise and glory?

Friend L., if you know any church that calls a liquor-dealer a good brother on account of his paying a large sum of money, you have seen some thing I have not. Are you not taking this from hearsay? I am sure that Christian people all over the land will smile at the position you take in this. In regard to mercy, may I suggest that Jesus showed mercy only to those who were penitent. You surely would not cut off all chance to retrieve to those who wish sincerely to turn over a new leaf and do better? There is a truth in the position you take, and Jesus himself said, on this point,—

> I came not to send peace, but a sword.—MATT. 10:34.

You are also right in your concluding words, and I really believe the way in which the world is to be converted is by actions, and by showing the spirit of Christ in our business with each other. I presume, of course, you will turn in and help on that line, will you not?

> Give us this day our daily bread.—MATT. 6 : 11.

Gleanings :—We admire your manner of dealing with your customers, your home writing, and your advice to X.Y.Z.; but it does not fully cover the case in point. What is the man to do while he is making a reputation, if wages are too low to support himself and family? It is like raising an orange grove in Florida, if one could only live while trees are growing. Many of us here are in the condition of X., only from 100 to 150 per cent worse. Our laborers can get only from 40 to 50 cts. per day, and then pay only for suitable weather when work can be done. If they turn their efforts to cultivating the soil, it is still worse. We, as merchants, lately sold what represents *an entire year's labor of one man* for less than 100 dollars. One half of this amount went for use of land and horse, and upon the remainder the laborer was expected to live honestly, and support himself and family, attend church, and send his children to school. The proceeds of labor on lands pay so little for rents of land, that the land-owners are in many cases advancing yearly rents to one-half of proceeds. Then the laborer will, on his 50 dollars a year, have to (in addition to the above) support his horse, or reduce his wages. Is it not time that civilization and Christianity were trying to solve this problem, before being forced to accept the Beecher prescription of "love and water" for subsistence?
W. R. W.

New Market, Ala.

Many thanks, friend W. As you present the case, it does indeed seem sad; and I grant that, from one standpoint, it seems a little discouraging. Without the help of God, Christianity, and civilization, it would be hopeless. You have spoken of civilization yourself, and so I presume those who get only $100.00 a year, as you say, are without education. Don't they smoke a pipe too, friend W.? They would probably complain that their parents were unable to give them an education, for want of means, and that it was therefore a misfortune rather than a fault. Now, this is where the trouble lies. These people can, every one of them, get an education now, if they will try. It amounts to just about the same thing as leaving off the use of the tobacco. It is really a matter of choice, and sums up the old story that Joshua told the people, "choose you this day whom ye will serve."

Friend W., if you have a queen that is so poor she will not lay enough to keep the colony alive, you can never make a permanent, good stock of it by giving brood from other swarms. Now, if you will forgive me I would suggest that the men you name can not be made self-sustaining by giving them money, or by giving them larger pay than they ordinarily command in the neighborhood where they are known. Instead of the prices coming up, the *men* must come up. More pay than they earn will do them harm rather than good. A queen can not well be changed; but a slow, dull, indifferent man may be taught to be quick, bright, and interested. I know, for it has been done, right under my eye. The sufferer, for sufferer he is, must first humble himself enough to admit his failing. He must be led to recognize that the reason why he gets less pay than other people is not because he is unfortunate, but that it is his own fault.

> They that be whole, need not a physician.—MATT. 9 : 12.

The greatest trouble in such cases is, that the individual will have it that he is all right, and the world all wrong. He must be led to take an attitude some thing like this: "If 50 cts. a day is my market value, I do not want any more, and 50 cts. a day must support me." When you can get a man right there, he is generally all right. The first part of Our Homes tells you how a man can live on 50 cts. a day, and fare well too. How about a family? Well, my idea is that no *good* man would willingly take a family on his hands until he could do a little better than this; but I have no idea but that many a wife and mother could tell me how a family *has* lived on a smaller income than that. "Do justly, love mercy, and walk humbly before God," and I tell you he *will* get along. Follow the teachings and spirit of the Bible, and there is no such thing as fail. I have had abundant experience in this matter, for I employ a great many hands, and I take them from all classes that come along. Where one has had small wages all his life, and is often out of work, there is a reason as plain as day. Set him to work a week, and it will be sure to show itself. Lack of physical strength may be a hindrance; but one who is thoroughly posted in regard to his work, and has his whole mind and soul in it, is worth his weight in gold, even if he isn't stout. Give me a boy in his teens, who delights to do his whole duty before God, and he is worth more to me than a man of age and experience, who is a hardened sinner. I do not mean those who say it in words, but those who say it by the actions of their daily lives.

Lord, help a poor sinful world. It is not money nor physical strength, nor even wisdom, that we plead for, so much as for that honesty and sincerity of purpose that only thy holy Spirit can give.

I will instruct thee and teach thee in the way which thou shalt go: I will guide thee with mine eye.—PSALM 32: 8.

TOBACCO COLUMN.

I HAVE made up my mind to try to see if I can give up tobacco, for I know what I do use injures me, and I will take the smoker pledge, if you will receive my application. I want it as a pledge; if I can't hold out, I won't say that I will pay for two smokers, but will pay full price for any one that I should receive; but I am going to keep the pledge, if possible, and earn the smoker accordingly. I would like you to send me one as soon as convenient, as I have some transferring to do, and need the use of one. R. F. BROOKS.

Thomedale, Chester Co., Pa., May 13, 1881.

I put 18 stands of bees in cellar last fall; have got 10 good left, carrying in lots of pollen. Put me down for a smoker, as I have quit using tobacco. I will pay the price of two when I use again. Send Simplicity cold-blast smoker. J. E. JEWELL.

Shell Rock, Butler Co., Iowa, May 4, 1881.

I have used the "weed" thirty-one years; if you send me a smoker *I will quit*. Bees lost in this part of Iowa about 85 per cent. M. L. THOMSON.

Earlham, Iowa, Apr. 26, 1881.

All right, friend T.; the smoker is sent. May God help you to be strong!

I have been a user of tobacco for fifteen years. I am going to quit the vile practice, with God's help. I want you to send one of your large size cold-blast Simplicity smokers, and away goes the vile weed.

G. M. TREAT.

Sandwich, De Kalb Co., Ill., Apr. 19, 1881.

You are one more, friend T., to the army of those who are "on the Lord's side."

I saw your offer to tobacco-chewers, that if they would stop chewing you would present them with a smoker free. You will please send me one, and I will quit immediately. I have but a few bees, or else I would have had one before. J. H. CUTCHAWL.

Greeneville, Tenn., May 5, 1881.

And here is the smoker, friend C., and may God help you to be strong!

I see in GLEANINGS that you give all a smoker who will quit smoking. I promise to quit, for one. If I fail I will be sure to send you the one dollar.

I. R. SNEED.

Henderson, Rusk Co., Texas, March 31, 1881.

All right, friend S. We send you the smoker.

I will take a smoker under your offer to tobacco-users. Please send one of Bingham's large size. I would not ask this if I were able to buy one, but I am poor, with a large family. A. A. ANNIS.

All right, friend A., and may God help you too. If you are poor and have a large family, you certainly can not afford to use tobacco, and have all your boys learning to use it after you, can you?

Smoker came all right. I like it best of any I have seen. You think my "nice cellar" saved my bees. If you could see them to-day carrying in flour I believe you would conclude that a "nice cellar" is a very nice thing for a bee-keeper to have such winters as the past. Some of my neighbors can hardly believe that my bees are all alive and strong, when theirs are all dead. G. A. WRIGHT.

Orchard, Iowa, April 16, 1881.

If I am not mistaken, you offer a smoker to any of your subscribers who will quit smoking. I have been using the weed for about 20 years; started by its being recommended by the doctor. My wife has been trying to persuade me to quit ever since we saw your first notice in GLEANINGS. Please send me a Simplicity cold-blast large size, and I will quit, God being my helper. M. G. CONDON.

Clinton, Mo., Apr. 21, 1881.

That is the talk, friend H. God being my helper, you can give up tobacco, and all else that is hurtful to you, spiritually or morally.

Well, brother Root, I have read Prof. Thwing's "Facts about Tobacco." Result: Quit chewing a week ago. I never thought of your offer until this morning. Now, you may send me one of your largest cold-blast smokers, and I will pay you for it within 90 days. My old smoker is about *ausgespielt*. My bees got their first pollen last Sunday, the 17th inst. Weather splendid now, and the bees are carrying honey from the elm. G. B. REPLOGLE.

Unionville, Iowa, Apr. 23, 1881.

We send you a smoker without charge, friend R.; and if you will be so kind, you may send me the work you mention.

A B C and smoker received; have quit the use of tobacco; hope to be able to conquer; at present, a hard struggle. M. L. THOMSON.

Earlham, Madison Co., Iowa., May 5, 1881.

Friend T., the Bible says:—

He that overcometh, the same shall be clothed in white raiment; and I will not blot out his name out of the book of life, but I will confess his name before my Father and before his angels.—REV. 3: 15.

Do not even think about the forbidden article, but keep mind and hands busy about some thing else. You will soon find that when your mind is off from the subject, you care comparatively little about it. Keep away from those who use it, but strive as far as possible to be in the company only of those who will encourage you by precept and example in your new resolution; and in a little time both the victory and the "white raiment" of purity and a clean heart shall be yours.

I saw in a number of GLEANINGS that you would send a smoker to any one who was a tobacco-smoker, providing he would give it up. Send on your smoker, and here goes pipe, tobacco, and cigars, in the fire. My wife saw it and showed it to me, and she says if I begin again she will write to you and let you know. I have been on a balance whether to quit or not; but that announcement of yours puts the balance in the right direction. D. W. MOORE.

Tintern, Lincoln Co., Ont., Can., Apr. 18, 1881.

Let us thank God, friend M., if so slight a thing as a bee-smoker turned the balance in the right direction, in a matter that at least closely pertains to the welfare of a human soul. Tell your good wife that I shall not only depend on her, but on the good women all over our land, to see that their husbands are faithful in these promises. Remember, it is Satan we are to battle with, and we must not expect him to give up without a "tussle."

Thanks, kind friend, for the smoker, but more for the faithful prayers in my behalf, that I might overcome tobacco. By the united strength of you and kind friends at home, to say nothing of my poor weak self, strength has been given me to overcome tobacco, and I feel that, in the spirit of the Master, I shall never be forced to take up the abominable weed again. I have lost one tooth since I gave up the habit, and began to think I would be forced to commence its use again, to save all my teeth, but, thanks to an all-wise Preserver, four months have almost wound up my taste for it, and I now sing,—

As thy days may demand, shall thy strength ever be.

Please remember me in your devotions to our Father in heaven, and present my name at the noonday prayer-meetings as a subject for prayer, that I may be faithful to the end; and when the bell is heard that calls me to the noonday prayer-meeting on high, that then my chair may not be vacant, nor my voice silent. W. F. R.

Clinton, La., April 23, 1881.

I am very glad, friend R., that you did not listen to the suggestion from Satan, that you would lose your teeth, etc. It is wonderful, the number of lies he puts into people's heads when they try to break off a bad habit. To one he says, "You will have the toothache, you know, if you don't chew;" and to another, "You will get too fat, you know," and so on without end. Just tell him to get behind you, and then reach up and implore God for help. We will remember you, friend R.

MERRYBANKS AND HIS NEIGHBOR.

HE THAT OVERCOMETH AND KEEPETH MY WORKS UNTO THE END, TO HIM WILL I GIVE POWER OVER THE NATIONS.—REV. 2 : 26.

OF course, there was no peace for anybody until John's pail bee-hive was properly fixed in the window up stairs, near the bed where he slept. As the lights in the window were rather small, it was thought best to remove the lower sash entirely, substituting a sash of John's own construction, covered with thin boards, through which a hole was cut, to let the pail go in about half way. The bottom of the pail projected outward, and in this was the entrance. As John was supposed to be joint inventor in the pail hive, Mr. Merrybanks gave him a good strong working colony; and as they were started just during locust bloom, they very soon had their five combs pretty nearly filled. Pretty soon "pollen-laden bees" began to come round on the side of the comb next the glass, and the children thought there never was any thing, in the way of pets, so handsome. Every bee that came in with a nice load of bright yellow or orange-colored pollen, would shake himself, and wiggle in such a way that Mary and Freddie would have it he was doing it for pure joy, just in the way John jumped up and down when he made the barrel hive roll off the table. After they had got through the wiggling, and had sobered down a little, they would thrust their little legs, with the "loaves" on them, into a cell, and kick them off very much in the way the baby sometimes kicks off his shoes and stockings, and then off they went for another load. After Mr. Bee had gone, the children could plainly see the two little loaves lying in the cell right where he left them, until some other bee would poke his head in and stay for some time, deeply intent on some important operation, as they thought, by the way in which the only visible tip of his body wiggled, and after he came out, the pollen loaves were nicely patted down, and made smooth. Mr. Merrybanks told them that the bee patted and smoothed it down by rubbing his head against it; or, at least, he had read so in the *British Bee Journal.* Mr. Merrybanks often quotes that journal, you know.

Well, John was so taken up with his bee-hive that he hardly slept or ate, and, although it was the last thing he looked at at night before he went to bed, it was the first thing he hastened to when he opened his eyes in the morning. To tell the truth, his mother, on going into his room one night, after he had long been asleep, found he had moved his bed up near the window, and was sleeping, with a smile on his face, close up by that simple little pane of glass. The bees had just been building some new white comb, to fill a vacant place left accidentally, and as they did the greater part of the comb-building in the night, John had folded his pillows so as to raise his head close up to them. There they were, scampering about, and, as it seemed, fairly trembling in their eagerness as the snowy-white combs grew into those wondrous forms. In the stillness of the night, interrupted only by the breathing of her boy, she thought she heard a faint clicking noise, like the tramp in miniature, of a thousand horsemen. She turned her ear nearer to the bees; it was indeed their busy work, and the sound of their tiny mandibles against the glass; for they were now fastening bits of new comb to it, in many places, as they wished to have their habitation substantial and secure. How innocent and pure her boy looked as he lay there, unconscious that any one was near, sleeping as only those can sleep who are tired out with honest, healthful labor! She reflected how faithful and industrious John had been of late. So absorbed was he with his bees, he had hardly had time to think of going off with any of the wicked boys as he had a few months previous been somewhat inclined to do. What had made such a difference in her family? She almost started, as it flashed upon her mind that there before her she saw the answer to her prayer of but a few weeks ago. Down she fell on her knees, at the thought, and silently thanked, again and again, that Savior who had indeed been an ever-present help in trouble. Then as she remembered her husband, who was still out of work, she prayed for him too. It was Saturday night; but as she at length lay down to rest, it was with a greater feeling of nearness to God than she had ever known before, and with a happy, trustful, restful feeling, that seemed to her almost too much happiness for one who had, almost all her life before this, known so much trouble and trial.

The next thing she remembered was hearing John's voice, calling, "O mother! father! come quick! The queen is laying right next to the glass. Come quick, or she may go round the other side again!" and off he scampered up stairs. At first, the feeling was somewhat of vexation at being awakened at such an early hour on Sunday morning; but as she thought of the events of the evening before, and reflected further that the sun was already up and shining, she hastened to get up, as did her husband also, after he rubbed his eyes until he was quite awake. Mary was on hand too; and although all of the family looked a little as if they had been scared out by an alarm of fire, they soon began to share John's enthusiasm, at least to some extent. There the queen was with her long tapering body, busily engaged at her appointed task, as unconcerned as if she was not the center of an admiring audience. Her mock gravity as she settled herself in a cell, and remained the center of a caressing circle of bees, was such that John laughed until the tears stood in his eyes.

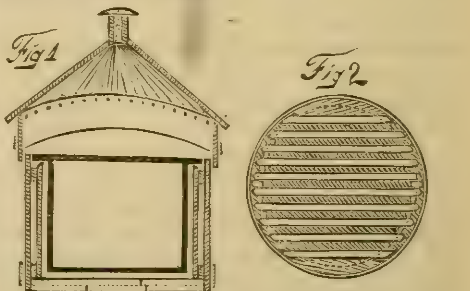
"O mother! mother! mayn't I go over and ask Freddie Merrybanks to come over and see her too? Please, mother, it won't be wicked to just come over a minute. You know she will get this side all filled to-day, and won't ever come out this way again. Please, mother, may I go?"

Silence gave consent, so John thought, and off he was, like an arrow. Fearing his mother might repent, as it seemed, he jumped almost the whole way from the top of the stairs to the bottom, and was soon out of hearing, if not out of sight. In a very short time, not only Freddie was seen coming, but friend Merrybanks too. John's father was a little surprised at this, knowing his strict ideas in regard to the Sabbath; but after all had looked at the queen, and friend M. had given them a little talk in regard to the greatness and goodness of God in endowing these little creatures with such a wonderful instinct, Mary apparently, by accident, turned the whole state of affairs in the right direction after all, by coming up to her father, and saying, as she took his hand in both of hers,—

"Now, pa, we have all had such a real good time in looking at the queen, you want to come with us to Sunday-school, won't you? You just see if we do not have just as good a time there."

Friend M. joined in with the request too; and, almost before he had time to consider, he gave a promise, and then reflected that he had no suitable clothes to go to such a place. In fact, he had not been inside of a meeting-house in so long a time, he hardly knew how folks did dress or act there. John's mother listened, while her heart almost stood still. Was the time of miracles still here? Was it really possible that God had heard that prayer of only last night? and was her husband really going with the rest to church or Sabbath-school? He was a man of his word, despite his other failings, and he did go to that very little church, whose steeple you have so often noticed over among the trees. He did not seem to get interested in the sermon, and finally went to sleep, much to his wife's mortification and surprise. After service, during the few moments that intervened before the Sunday-school, the superintendent took him by the hand and spoke pleasantly to him, though still in not such a way as to remind him that it was singular to see him there; and in the Bible-class, where he sat with his wife, there seemed such a pleasant and friendly feeling, he really, somewhat to his surprise, enjoyed it so that he was actually sorry when it was over. On the way home he asked so many questions of his wife in regard to the lesson and people present, that she forgot his sleeping during the morning, and was again inwardly thanking God for his great mercies. After supper he lighted his pipe, and, in spite of his wife's pleading, sauntered off up to the "Corners" as usual. Who shall fathom the mystery of the human heart?

Next evening friend Merrybanks came over, with a number of the *British Bee Journal*. All hands gathered eagerly around while he spread it out upon the table. Mary, too, was interested, for that pail bee-hive seemed especially the property of the children since the stampede down by the hog-pen; and as friend M. announced that they had started a round cheap hive in England too, all were eager to see what it was like. We will just take a peep over their shoulders at the picture they saw on the broad clean pages of the journal.



THE CHEESE-BOX BEE-HIVE.

After all had taken a good look at the picture, Mr. M. read from the description as follows:—

CHEAP HIVE FOR AMATEURS.

I send you a sketch and description of a very cheap hive, which some of your readers who make their own may try their hands upon. It is made out of two and a half American cheese-boxes, which cost me fourpence each; one 15 in. in diameter serves for the inner skin, and one of 16 in. diameter for the outer skin of the hive. (The usual depth of these boxes is from 9 to 10 inches.) The inner skin should be three-eighths of an inch higher than the outer to form the feather edge on which the frames are to rest. The two skins are kept apart by a double hoop ¾ of an inch wide, placed at the top and bottom. These may be made by cutting in half the hoops of the box, and as they are usually ¼ of an inch thick, they will keep the two skins ½ inch apart, and thus form a sufficient air space between them. As strong a hoop as can be got from the boxes and lids must be put round the hive, standing 1 inch above the outer skin, and another at five-eighths of an inch below the outer skin. Room will thus be given for the thickness of the frames and quilt above, and the floor-board will be overlapped below, and wet or rain excluded. The floor-board is made from the box-lid and bottom. These are usually in three pieces, and when nailed together should be crossed under side pieces. Of these the middle one should project, to form the alighting-board; and the deficiency supplied from any piece of wood at hand. The floor-board will thus be double. The upper thickness is cut away sloping upward to form a sunk entrance into the hive. The floor-board is represented in its place in Fig. 1, which represents a section from side to side with one of the middle frames in position. The hive has a cover made of half a box, 5 inches in height, and over this is a conical top made of paper-felt, painted and fastened with thin copper wire to the wooden part; the flight-hole, porch, and slot for slides or doors, which are made of strong tin or zinc bent to shape. Fig. 2 shows the arrangement of the frames, ten in number. Half of them have distance-blocks toward the front, and half toward the back, both blocks being on the same side of each frame. In the center are two movable blocks attached to the side of hive by a thin but strong piece of string. When manipulating they are lifted out, and thus room is given to move all the frames. The whole cost of the materials, including paint, panel-nails (screws, if any), and putty, is about *2s.*, and certainly does not exceed *2s. 6d.*; but I must add, that there is a good deal of work in the hive, and it requires much nicety in fitting, though not more than most amateur carpenters are equal to.

The result is a round hive, which in shape corresponds with that of a cluster of bees, and I think is dryer than the square hives, in the corners of which moisture is apt to be condensed; and, secondly, is much more shapely and ornamental in a garden, and equally adapted for carrying supers of any kind desired.

"There," said Mr. M., "they have not got so near a sphere as we have, after all, and the hive is a deal more expensive every way. The combs would handle nicely after one is out, for by moving them toward the center, every one would be free, while, when in place and the loose block put in, all are tight and strong."

"But," said John, "they have 8 frames, while we have in our hive but 5, and such frames as those must be a great deal of trouble to make." You know John was some thing of a genius, and knew the expense of whittling out things.

"Nevertheless," remarked Mr. M., "I am very glad to see this description, for it indicates a wish, on the part of the people, to make common implements and utensils serve a part in providing habitations and implements for the care and comfort of our queer little domestic friends. Many thanks to the editor of the *B. B. J.*" And he gathered up the journal, and put it in one of his many pockets, grabbed up Mary, and, placing her on one of his broad shoulders, started out in the darkness of the night, amid her protests and the laughter of the whole family. Before he had gone many steps, however—come to think of it, I guess I will tell what an awful muss they got into by some more of that boy John's "everlasting carelessness," next month.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, JUNE 1, 1881.

The wages of sin is death.—ROMANS 6:23.

WE have to-day 4329 subscribers, orders are filled pretty nearly up to date, and I am in a thankful frame of mind.

WE can furnish Spider and Simpson plants for 25c. per hundred by mail, postpaid, done up in the manner indicated on page 277. Daniel Speer, of Cardington, Morrow Co., O., writes that he has thousands of Spider plants, and he will doubtless furnish them at the same price.

ONE good thing has grown out of the loss of our bees, at any rate. It has obliged others to take up the trade of selling bees by the pound, and rapidly developed the new industry that seems to me is going to teach us a lesson of helping each other, in a way we were never taught it before.

A FEW of the supply dealers still show a little too much of the spirit, "you know you can't please everybody." If I should hear you say, "The world in general are not very hard to please," I should feel much more certain you were trying to be honest and just toward all.

MAY 26th. — We have to-day 145 colonies, and the last box hive was transferred this morning by getting up before 5 o'clock, to avoid robbers. All orders are filled, except for pounds of bees with dollar queens. We have the bees, but can't get the queens, although a great number are ready to lay.

WE have finally got a very good pair of steel specs on our 10c. counter. The glasses are good, and the frames nice and well made. In ordering, you had better have them sent, for safety, in a 5c. case. Postage on the whole will be 5c, making 20 for the whole complete by mail. Tell the number of the glasses you wear, if you can; if not, tell me your age, and I can guess pretty well what you will be likely to need.

THE revised edition of the New Testament is out, and the Gospel of St. John is now before me. The price of the latter is 2c; postage 1c more. The whole Testament 10c, postage probably 3c more. I have not got any yet, but I have been having a real fight to get some to supply you, and will doubtless have them as soon as any one. If you care to intrust me with your orders, I will mail them promptly the minute they reach me.

Our friends will please notice that *we* shall charge $2.00 per lb. for bees during this month. The prices for queens, frames of brood, etc., will be as other years. The reason of the great call for bees especially, is that 1 lb. of bees will "fit" any hive, while a frame of brood won't.

WIRE NAILS REDUCED.

Quite a reduction in the price of wire nails, as you will see by the last edition of our price list. As those we sell are made purposely for us, and of slimmer wire than any of those in the market, there are more of them in a pound. Please compare our nails and prices, with those found elsewhere.

SOMETHING NEW IN SMOKERS.

An original Clark cold-blast smoker, that blows so easy, and makes such a cloud of smoke I am really afraid it will make trouble—among hybrids and smoker manufacturers. It lights with a match, and the price is 50c., or $4.00 for 10; if wanted by mail, 25c. extra. A circular with an engraving, sent on application.

THE NEW QUINBY SMOKER.

In my mention of the new Quinby smoker, I should have stated, that, after we have blowed the fire with the direct blast until it is burning vigorously, throwing out sparks perhaps, by moving the slide and making it a cold blast, the sparks stop instantly, and we have only a blast of cold air, charged with smoke. We can furnish them in any quantity at friend Root's prices. See our price list.

Our friend L. C. Root has wintered again in his cellars, with a loss not to exceed 10 per cent, and of these, many died of starvation. He preferred to let them starve rather than to risk the damage which he thinks would result from disturbing them by feeding in the cellar, or attempting to take them out before the usual time, when the soft-maples are in bloom.

BEES BY THE POUND WITHOUT WATER.

We have tried a few cages provisioned with Viallon's candy, without water, for sending pounds of bees short distances, say in an adjoining State; and up to date of going to press, no complaint has been received. Our friend Gates, of Bartlett, Tenn., has sent us perhaps 20 packages in the same way; but while some of them came with scarcely a dead bee, others came with all the bees dead, and candy remaining. In very hot dry weather, the bottles of water seem much more necessary.

WATERBURY WATCHES CHEAPER.

Notwithstanding the recent improvements in Waterbury watches, we have been enabled to make the following reductions in prices, and every watch we sell is tested by ourselves before we send it out. One watch, $3.50; two, $6.75; three, $9.75; six, $18.00; twelve, $34.50. If wanted by mail, send 15c. additional for each watch. If you should order one, and it does not please, you may return it inside of 30 days, in as good order as you received it, and get your money, you paying all postage.

CYPRIAN AND HOLY-LAND QUEENS AND BEES.

Neighbor H. rushes into the office, just as the last form is being made up for the press, and says we *must* say this for him, to save him from answering so many postals:—

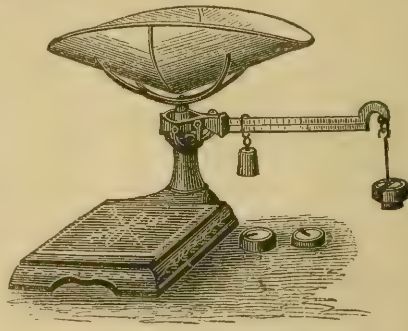
The Cyprians wintered the best of any bees I had. The Holy-Lands did not winter quite as well, but were not in as good condition in the fall. They will get up earlier in the morning, fly faster and further than any other bee I ever saw. The queens are very prolific, and they built up strong very quickly in the spring. I have them in separate apiaries, and will send you laying queens of either races for 50c extra over the price of our usual dollar queens. H. B. HARRINGTON.
May 27th, 1881.

"John" reports that there isn't a black nor hybrid queen among the whole 145 colonies. I am glad on some accounts, and yet I am sorry; we have had so many orders for such, during the past month, I fear we shall have to disappoint many. We have plenty of nice tested queens, and about all orders for dollar queens singly are filled, but for dollar queens with lbs. of bees, we are behind 60 or 70. We have got the bees, and the queens are coming from the South daily, but still they don't come quite fast enough. In a week, we may have them stacked up so we shall not know where to put them.

MAY 27, JUST FOUR MINUTES OF 2 O'CLOCK P.M.

We hold the press, to announce that Mr. Gray has succeeded in making a very fair sheet of fdn. by means of the rubber plates, in a wired frame. The sheet is perhaps a little heavy, but as the bees will work it all into thin comb it is no loss at all, and we shall of course get it thinner as we proceed. The metal corners are put on the frame after the sheet is made in it. The price of the pair of rubber sheets alone is $5.00; mounted and hinged, $8.00; and $15.00 for the whole apparatus for melting and distributing the wax. This is for the L. frame, or any size that can be cut out of the L. frame. Small plates for starters, etc., 5 cts. per sq. inch; the same mounted, a half more.

Quite a brisk trade has sprung up in the $4.50 scales, and as there has been so much inquiry as to how a scale of this capacity could be made for such a small sum of money, we submit the engraving and description of it below.



THE 244-LB. SCALE, FOR ONLY $4.50.

It is of the well-known Chatillon make, has both platform and scoop, as you see, full steel bearings, and the whole is neatly striped and ornamented. Capacity from ½ oz. up to 244 lbs. We have never had a complaint from any we have sold.

◆

EXTRACTING WAX BY STEAM.

From the 34 box-hive colonies, we of course had a considerable amount of old combs to render into wax. Well, a few days ago friend D. A. Jones wrote about extracting by steam. Perhaps it was more than a month ago, but he writes so "awful bad," that I have been almost that time in trying to read his letter at odd spells, begging friend J.'s pardon. Well, after I got it read, and got the idea, I took a very large honey-barrel and suspended in it, from a hoop at the top, a basket, made from queen-cage wire cloth. This was set right under a steam pipe, and after the steam was let on, all you had to do was to shovel in the combs. The business was done as fast as you poured them in, and when the contents of the basket was poured out, there seemed to be scarcely a trace of wax left in it, while that in the barrel was about the prettiest yellow wax you ever saw—so clean that it was poured directly into our dipping-cans, and made into fdn. at once. With any of our other arrangements it would have been about a day's work. Friend Jones, here is our thanks, even if you do write badly. Now, at the end of the subject of "Propolis," in the A B C, you will see that friend Pritchard almost touches on this very idea, and yet nobody ever thought of it before. At least, it didn't get into the book, any way.

CITY MARKETS.

Cleveland, May 23, 1881.—*Honey.*—As usual, at the beginning of the berry season, honey is entirely neglected. The little stock in market is nominally held at 16@18c per lb. for 1 and 2 lb sections of white; dark not wanted. Extracted held at 12@14c, but very slow sale. A. C. Kendel.

St. Louis.—May 23.—Season about over; small sales of strained at 8@9½c. R. C. Greer & Co.

Recent Additions to the
COUNTER STORE.

FIVE-CENT COUNTER.

Postage.]		[Pr. of 10,	of 100
2	Mustard Spoons, best boxwood	25	2 00
2	Plates, A B C, 6 in., tin	25	2 00
2	Pie Crimpers, for making and cutting pie crusts	25	2 00
5	Candy, a whole bag full of all kinds for only 5c	45	4 25
4	White Envelopes, For ladies, fine paper, medium sizes.	30	2 50

TEN-CENT COUNTER.

2	Balances, pocket letter balance Weighs from 1-2 oz., to 1 lb. Nickel plated, and accurate, and very pretty.	75	7 00
3	Butter Knives, real plate, pretty pat.	80	7 50
13	Dippers, stamped, 3 qt., (really 2½)	80	7 50
4	Knives, Kitchen, fine steel With beautifully finished handle.	80	7 50
5	Knives and Forks An excellent article in either cocoa wood handles, or white bone. A knife and fork count two.	80	7 50
5	Tea Spoons, tinned, a set of 6 for 10c.	85	8 00
2	Wallets Imitation calf, old Vermont bill holder.	85	8 00
2	Wallets, ladies Fine soft leather, nickel ornamented.	85	8 00

FIFTEEN-CENT COUNTER.

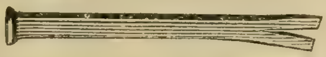
4	Carpenter's Compasses, 4 in. Fine polished steel.	1 25	12 00
1	Lamp Shades Porcelain, or opaque glass, 6 in. These are the only really durable, and always neat and clean shades. The brass ring to support them on the lamp cost, the same as the shade.	1 20	10 00
10	Sieves, all metal A new, and very valuable utensil, nearly a foot in diameter, and without seam or joint.	1 20	11 00

Twenty-Five Cent Counter.

10	Coffee Boilers, 4 qt.	2 00	18 00
	Lamp Shades, Porcelain Same as on 15c counter only 7 in. Brass ring to support them same price.	1 80	16 00
18	Paraffine, For waxing honey barrelss, putting in starch, etc. etc.	2 25	21 00
	Robinson Crusoe, Complete Illustrated by many pictures, 210 pages, fine print.	1 75	16 00

Thirty-Five Cent Counter.

12	Balance, with Tin Dish Suspended by 3 chains; 24 lbs. Chatillon's make.	2 75	25 00



	Box Chisels, A most handy tool for opening boxes.	3 00	28 00

FIFTY-CENT COUNTER.

	Clothes Lines Galvanized wire; 100 feet long.	4 00	35 00
	Spades, steel, full size; well made	4 50	43 00

A. I. ROOT, Medina, Ohio.

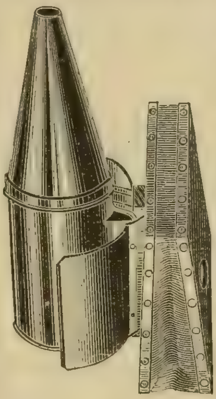
MAKE BEES PAY

By getting the best Italian stock tested for "biz." *Good prolific* queens from 65 cts. up. Use molded fdn. It pays big, 40 cts. for common, 50 cts. for thin. Improved "L." fdn. mold. $3.75, other sizes to order. Metallic mold. L. size, $7.50, ready soon. See Oliver Foster's free circular. OLIVER FOSTER.
Mt. Vernon, Linn Co., Iowa. 6tfd

Colerain, Mass., April 11, 1881.
Messrs. Bingham & Hetherington,—

Dear Sir:—I concluded to use the Large Smoker instead of sending it away. It is *the smoker*. I don't wan't any better; shall throw all others away.
Respectfully, E. A. Thomas.

THE ORIGINAL DIRECT DRAFT!



Patented Jan. 9, 1878; May, 1879; Re-issued July 9, 1878. If you buy a Bingham Smoker, or a Bingham & Hetherington Honey-Knife, you are sure of the best and cheapest. The largest bee-keepers use them exclusively. Twenty thousand in use; not one ever returned, or letter of complaint received. Our original patent Smokers and Honey-Knives were the only ones on exhibition at the last National Bee-Keepers' Convention. Bingham Smokers, all but the Small, have fire and cinder proof bellows. The large and extra Standard Smokers have extra wide shields to prevent burnt fingers. These are the only real improvements made in bee-smokers since the Direct-Draft invention. Bingham is the inventor and only *legal* maker of them.

Bingham & Hetherington Honey-Knife, 2 in.,	$1 00
Large Bingham Smoker, 2½ in.,	1 50
Extra Standard Bingham Smoker, 2 inches,	1 25
Plain Standard Bingham Smoker, 2 "	1 00
Little Wonder Bingham Smoker, 1¾, "	75

If to be sent by mail, or singly by express, add 25 cents each, to prepay postage or express charges. Send card for testimonials. To sell again, apply for dozen or half-dozen rates. Address
BINGHAM & HETHERINGTON,
5tfd Abronia, Allegan Co., Mich.

Save Money!

Single Queen, Tested,	$1 50
Untested, Laying,	80
Warranted,	1 00
Three-Frame Nuclei,	2 50

All Queens from imported mothers. Safe arrival guaranteed. All that favor me with orders shall be well used. DAN WHITE,
6d New London, Huron Co., Ohio.

THE
British Bee Journal.

The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan. 1881. Will guarantee safe arrival of every No.
A. I. ROOT, Medina, Ohio.

Farm for Sale.

A farm of 80 acres, pleasantly situated, good buildings, and well improved. Only 2½ miles from the village of South Haven, and situated in the heart of the "Michigan Fruit Belt." Unquestionably the best and most profitable point for fruit culture in America. A full crop of peaches this season. Churches, schools, and excellent society. Climate healthful and pleasant. Mild winters, and cool summers. Located on the east shore of Lake Michigan. For terms and particulars, address
H. A. BURCH & CO.,
6d South Haven, Van Buren Co., Mich.

ITALIAN and Albino Queens. Untested Queens, bred from Imported and Home-bred mothers, $1.00; per doz., $10.00 this month. Albino queens, untested, $1.00 each. J. M. C. TAYLOR,
6d Lewistown, Frederick Co., Md.

READ WHAT THEY SAY!

—o—

The only swarm of bees alive in this township, contains a queen I bought of you; they are lively.
J. R. M. ALLEN.
Greencastle, Ind., April 16, 1881.

Of the 31 dollar queens purchased of you last season, only one proved impurely fertilized. They have wintered finely, while three-fourths of the bees in this section are dead. L. DENSMORE.
Livonia Station, N. Y., April 11, 1881.

Could give scores of letters in praise of

Our Strains of Italians

like the above. If you want bees that are hardy enough to

SURVIVE OUR COLDEST WINTERS,

and that will pile up the box honey, give us a trial order. Can furnish

DOLLAR QUEENS,
WARRANTED QUEENS,
TESTED QUEENS, and
IMPORTED QUEENS.

Bees by the Pound,

NUCLEI AND FULL COLONIES.

Before ordering goods, send us a list of articles you wish to purchase, and get our price for the same.

OUR 40-PAGE CATALOGUE

of Apiarian Supplies, free to all. Address,

H. A. BURCH & CO.,
6tfd **South Haven, Mich.**

15 One-Cent STAMPS

Will pay for our exhaustive pamphlet on raisiing, handling, and marketing extracted honey.

Colonies with imported Italian Queens of our own importation, *guaranteed pure and genuine.*

Our Comb Foundation was awarded the diploma at the N. E. Bee-Keepers' Convention held in February. The following letter will show its superiority:

Medina, Ohio, April 4, 1881.

To Chas. Dadant & Son, Hamilton, Ill.:

Please send me 10 or 15 sheets of your very nicest Dunham Foundation, 8½x17⅝. As I want them to get rubber casts from, I want them nice and true, and nicely packed; don't care what the expense is. I send to you because you have sent me the best specimens. A. I. ROOT.

SMOKERS, KNIVES, EXTRACTORS, ETC.

Price List with 3 samples of foundation, free.

CHAS. DADANT & SON,
5tfd **Hamilton, Hancock Co., Ill.**

Hill Side Apiary,

SUMMMIT, N. J.

Queens, Bees by the pound, Nuclei, or full colonies, Hives, Extractors, Smokers, &c., &c. Send for circular. W. B. COGGESHALL, SUPT.,
6 Hill Side Apiary, Summit, Union Co., N. J.

For Sale Cheap

A few fine Colonies of Italian Bees in Langstroth hives. Hives well made, and painted. Address at once, W. G. SMITH, 213 N. Second St., St. Louis, Mo.

QUEENS! ITALIAN QUEENS!

Bred from selected queens of my own importing. Sent by mail; safe arrival guaranteed.

Warranted! If any queen ordered of me proves hybrid, I will, when notified, send another, *free* (but in such cases unwarranted, just begun to lay). Queens in June, $1 15; after July 1st, $1.00 each. Discounts—on an order for 10 queens, one extra will be given; for 25, three extra. Write for discounts on larger orders. Tested queens, double above prices. CHAS. R. BINGHAM,
Edinburg, Portage Co., O.
Money Order Office, Ravenna, O. 5-7d

CHOICE QUEENS

FOR 1881!

Dollar Queens.............	$1 00
Tested "	2 00

I guarantee satisfaction every time, or money refunded. No blacks in my neighborhood. All queens raised from A. I. Root's imported stock. Send for circular. HOWARD NICHOLAS,
4-9d Etters, York Co., Pa.

1881.

Send for our new Circular and Price List of Full Colonies, Nuclei, and Queens. We guarantee satisfaction. S. D. McLEAN & SON,
2-7d Culleoka, Maury Co., Tenn.

Bees by the Pound!

H. V. Train, Mauston, Wis., will sell bees and queens during June and July. Please correspond by card for terms and price. 6d

INFORMATION WANTED.

Any one knowing the address of Dr. Steven I. Young, M. D., late surgeon in the 79th Reg. Ill. Vol. Inf., and sending it to the undersigned, will place him under many obligations.
Rev. R. G. THOMPSON,
6d Kingsville, Johnston Co., Mo.
(Late Chaplain 64th Regt. O. V. V. I.)

ITALIAN QUEENS, NUCLEUS COLONIES.

I can furnish Bees and queens cheap. Send for special rates. Comb Foundation and every thing pertaining to the Apiary. A. D. BENHAM,
6tfd Olivet, Eaton Co., Mich.

Full Colonies, Bees by the Pound, Nuclei, Fdn., &c.

I am prepared to fill orders for bees by the pound, nuclei (2 and 3 frame), full colonies of pure Italians. Also Cyprian Queens (Dadant's importation), and Italian Queens at A. I. Root's prices.

Given Fdn. a Specialty. Try it once, and see if you do not pronounce it the best you ever used.
E. T. FLANAGAN, Belleville, Box 819,
6-8d Rose Hill Apiary, St. Clair Co., Ill.

1881 QUEENS! QUEENS! 1881

We are prepared to furnish Queens in April, May, and June. For tested Queens, $2.50; afterward, $2.00; untested, $1.00. Queens reared in full colonies from imported mother. In addition to our imported Queens, we have some fine Queens in our apiary from some of the leading breeders of the U. S. We not only select our imported Queens to rear Queens from, but we select the best imported and the best home-bred Queens we have to rear drones from. We allow no colonies to have drones, except such as are from the choicest of our Queens. Satisfaction and safe arrival of all Queens guaranteed. No circular. HALL & JOHNSON,
3-6inqd Kirby's Creek, Jackson Co., Ala.

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ESSEX PIGS A SPECIALTY!

75 to 100 Pedigree Pigs for delivery in June, six weeks to two months old. Write for prices.

Also Brown Leghorn (prize winners) EGGS, @ $1. per doz., and B. B. R. G. Bantam Eggs for Hatching (imported), @ $1.50 per doz., in new baskets. Safe arrival guaranteed. **C. W. CANFIELD,**
5tfd **Athens, Bradford Co., Pa.**

ITALIAN AND CYPRIAN QUEENS, bred from imported mothers. Write for prices to
H. T. BISHOP,
6-7d Chenango Bridge, Broome Co., N. Y.

Italian (tested) Queens from Root's very best.

Imported or home-bred Queens, $2.00; Italian (untested) Queens, Laying, $1.00; Bees, $1.00 per lb.; 2 (L.) frame Nucleus (no queen) $1.50; 3 (L.) frame Nucleus (no queen), $2.00; 1 colony of Italian Bees (no queen) in 10 (L.) frame hives, $7.00. Add price of queen to price of bees, colony, and nucleus. Discount on larger orders. OTTO KLEINOW,
6tfd Opposite Fort Wayne, Detroit, Mich.

1881 HIVES FREE! 1881

Where two or more nuclei are ordered at my June prices, I will furnish them in full-sized Roop hive, free of charge. Queens all from dark imported queen, or light. A few good breeders at $4.50 per one-comb nucleus. I am ready; send your order to
F. E. TOWNSEND,
7d Hubbardston, Ionia Co., Mich.

THE BEST OFFER YET!

I have a quantity of Simplicity and other frame hives filled with comb and honey. I will put in 1 lb. of bees, 1 warranted queen, 1 frame of brood, and ship them at $5.00 each. Warranted queens from my superior strain of Italians, safe arrival guaranteed, $1.00; no guarantee, 80c. Plymouth Rock eggs, $1.00 per doz. Address,
7d H. BARBER, Adrian, Len. Co., Mic .

KIND READER! Do you want to buy queens? If so, give me a trial order. I am confident I can please you. **FINE WARRANTED ITALIAN QUEENS** a *specialty*. Prices: single queen, $1.00; per ½ doz., $5.50. Send for circular.
J. P. MOORE,
7d Box 27, Morgan, Pendleton Co., Ky.

1881.

Send for our new Circular and Price List of Full Colonies, Nuclei, and Queens. We guarantee satisfaction. S. D. McLEAN & SON,
2-7d Culleoka, Maury Co., Tenn.

LIVE BEES IN MICHIGAN!

Italian Queens, Bees, and Supplies; also Dollar Queens the rest of the season. Descriptive price list free. Address O. H. TOWNSEND,
6tfd Hubbardston, Ionia Co., Mich.

HILL SIDE APIARY,
ITALIAN & CYPRIAN QUEENS!

Untested queens, $1.00; Tested, $2.00; Selected, $3.00; Pound of Bees, Italian, $1.00; 2 Langstroth-frame nuclei, $2.00; 3 Langstroth-frame nuclei, $3.00. For prices of Novice Extractors, Veils, Smokers, Hives, &c., &c., address
WM. B. COGGESHALL, SUPT.
7 Hill Side Apiary, Summit, Union Co., N. J.

C. OLM'S COMB FOUNDATION MACHINE.
SEND FOR SAMPLE AND CIRCULAR.
5tfd **C. OLM**, Fond du Lac, Wis.

BEES FOR JULY!

Blacks, ½ lb., 50 cts.; 1 lb. or more, per lb., 75 cts.; Italians, double price. Nuclei, 2-frame, no queen, $1.25; 3-frame, $1.50. Italian nucleus, $2.00. Black or hybrid queens, 50 cts. each. Fdn. starters, per 100, 50 cts. For further particulars, address
S. P. CULLEY,
7d Warrensburgh, Johnson Co., Mo.

I WILL furnish bees during July, Aug., and Sept., at one dollar per pound. Also queens at A. I. Root's last year's prices. H. L. GRIFFITH,
7 Sumner, Lawrence Co., Ill.

No. 013 Price 50 Cents.

HAND-FORGED RAZOR STEEL KNIFE FOR 50 CENTS!
MAHER & GROSH, 34 N. MONROE ST.,
TOLEDO, OHIO.

Hand-Forged Razor Steel Knife for 50 cents. Maher & Grosh, 34 N. Monroe St., Toledo, O., will mail Knife like cut, post-paid, for 50c. Extra heavy 2-blade for rough usage, 75c. *Our Best* 2-blade, oil temper and tested, $1. Pruner, oil temper, $1. Pruning Shears, $1. All goods exchanged free if soft or flawy.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Newark, Wirt Co., W. Va.	2-1
*A. I. Root, Medina, Ohio.	
*H. H. Brown, Light Street, Columbia Co., Pa.	7tf
*E. M. Hayhurst, Kansas City, Mo.	1-12
*Paul L. Viallon, Bayou Goula, La.	7tfd
*D. A. McCord, Oxford, Butler Co., O.	1-12
*S. F. Newman, Norwalk, Huron Co., O.	7tfd
*Chas. G. Dickinson, Sou' Oxford, Chen. Co. N. Y.	1-10
*Wm. Ballantine, Sago, Musk. Co., O.	7tfd
J. S. Tadlock, Kingsbury, Guad. Co., Texas.	3-7
*W. H. Nesbit, Alpharetta, Milton Co., Ga.	7tfd
*J. O. Facey, New Hamburg, Ont., Can.	4-9
*H. Nicholas, Etters, York Co., Penn.	4-8
*John Conser, Glenn, Johnson Co., Kans.	4-9
*Fischer & Stehle, Marietta, Wash. Co., O.	4-9
*Jas. P. Sterritt, Sheakleyville, Mercer Co., Pa.	5-10
*Oliver Foster, Mt. Vernon, Linn Co., Iowa.	5tfd
*V. W. Keeney, Shirland, Win. Co., Ill.	6-9
*C. B. Curtis, Selma, Dallas Co., Ala.	6-11
*T. W. Dougherty, Mt. Vernon, Posey Co., Ind.	7-12
*L. E. Welch, Linden, Gen. Co., Mich.	6tfd
Geo. W. Baker, Lewisville, Henry Co., Ind.	
S. P. Roddy, Mechanistown, Fred. Co., Md.	7-8
*J. W. Keeran, Bloomington, McLean Co., Ill.	7
*G. W. Williamson, Willow Island, Pleasants Co., —W. Va.	7
C. Kendig, Naperville, Dupage Co., Ill.	7
*F. A. Salisbury, Geddes, Onon. Co., N. Y.	7tfd
L. W. Vankirk, Box 178, Washington, Wash. Co. Pa..	

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.	
Sid. D. Buell, Union City, Branch Co., Mich.	2-7
P. L. Viallon, Bayou Goula, Iberville Par., La.	1tfd
S. F. Newman, Norwalk, Huron Co., O.	1tfd
J. F. Hart, Union Point, Greene Co., Ga.	4-3
M. S. West, Flint, Genesee Co., Mich.	2-7

Foundation Manufacturers.

Who agree to make such foundation, and at the prices given, as described in our circular.

A. I. Root, Medina, Ohio.	
Jas. A. Nelson, Wyandott, Wyandott Co., Kans.	4-9

Bees by the Pound.

Those whose names appear below agree to furnish bees by the lb., and at the prices given in our circular.

I. L. Scofield, Chenango Bridge, Broome Co., N. Y.
S. C. Perry, Portland, Ionia Co., Mich.
J. P. Moore, Morgan, Pendleton Co., Ky.
W. R. Whitman, New Market, Madison Co., Ala.
Chas. Kingsley, Greeneville, Greene Co., Tenn.
C. D. Wright, Baxter Springs, Cherokee Co., Kans.
H. B. Harrington, Medina, Medina Co., O.
W. St. Martz, Moonshine, Clark Co., Ills.
O. H. Townsend, Hubbardston, Ionia Co., Mich.
G. W. Gates, Bartlett, Shelby Co., Tenn.
W. S. Canthen, Pleasant Hill, Lancaster Co., S. C.
J. G. Taylor, Austin, Travis Co., Texas.
T. P. Andrews, Farina, Fay. Co., Ill.
Allan D. Laughlin, Courtland, Law. Co., Ala.
E. J. Atchley, Lancaster, Dallas Co., Texas.
D. McKenzie, Carrollton P. O., N. O., La.
H. L. Griffith, Sumner, Law. Co., Ill.
J. H. Martin, Hartford, Wash. Co., N. Y.
W. A. Pirtle, Cabot, Lonoke Co., Ark.
E. T. Flanagan, Belleville, St. Clair Co., Ill.
J. K. Mayo, Stafford, Fort Bend Co., Texas.
J. F. Hart, Union Point, Greene Co., Ga.
B. Chase, Earlville, Madison Co., N. Y.
S. P. Roddy, Mechanicstown, Fred. Co., Md.
W. J. Ellison, Statesburg, Sumter Co., S. C.
R. A. Paschal, Geneva, Talbot Co., Ga.
Hall & Johnson, Kirby's Creek, Jackson Co., Ala.
A. Osbun, Spring Bluff, Adams Co., Wis.
H. D. Heath, Sherman, Grayson Co., Texas.
F. A. Salisbury, Geddes, Onon. Co., N. Y.
N. B. McKee, care of D. & D. Inst., Indianapolis, Ind.
J. B. R. Sherrick, Mt. Zion, Macon Co., Ill.

HEADQUARTERS IN THE SOUTH

For the Manufacture and Sale of

BEE-KEEPERS' SUPPLIES!

Italian Queens and Bees, all bred from mothers of my own importation. Dollar queens, $1.00. Tested queens, $2.50; 4-frame Nucleus, $5.00. Safe arrival and satisfaction guaranteed. Send for my illustrated catalogue.

PAUL L. VIALLON,
6tfd Bayou Goula, Iberville Par., La.

LOOK at our Prices for July!

Don't send any more orders for bees by the pound, *Because* we must sell Bees, Brood Combs, and all. Our business, but especially our neighbors, won't allow us to keep bees in large numbers.

One 8-Frame Colony, in Simplicity hive,	$5 00
One 4-Frame Nucleus,	3 00
One 2-Frame Nucleus,	2 00

All to be well filled with bees, brood, and honey. Add price of queen to the above.

1 Tested Queen,	$2 00
1 Untested Queen,	1 00

Safe arrival guaranteed.

FISCHER & STEHLE,
7d Marietta, Washington Co., Ohio.

An Italian Queen

FOR **15** CENTS.

We guarantee to every one who sends a dollar for the *American Bee-Keeper*, to send a pure untested Italian queen for 15 cents more.

4-7d E. M. HARRISON, Lebanon, Laclede Co., Mo.

A RARE CHANCE

to buy a three-horse power engine, with or without machinery, for the bee-keeper's supply business. Write for particulars. B. S. UNDERHILL,
7d Williamson, Wayne Co., N. Y.

200 sq. ft., 20 lbs., Vandervort fdn. for $10.00. Orders filled immediately.
7d G. W. STANLEY & BRO., Wyoming. Wy. Co., N.Y.

MAKE BEES PAY

By getting the best Italian stock tested for "biz." *Good prolific* queens 75 cts. each; $7.80 per dozen; Tested, $1.50. USE MOLDED FDN. It *pays big*, 40 cts. for common; 50 cts. for thin. Improved fdn. mold, "L." size, Plaster, $3.75; Metallic (ready soon) $7.50. Root's rubber, $8.00. Outfit for same, $5.00. See free circular.

OLIVER FOSTER,
Mt. Vernon, Linn Co., Iowa.

CYPRIAN, HOLY-LAND, HUNGARIAN, AND ITALIAN Queens & Bees!

I have had 20 years' experience in the queen-rearing business. All my queens are raised in full colonies, on a new principle, and we send out no in-and-in-bred queens. We combine beauty, purity, industry, and docility. I consider the Hungarian bees, crossed by the Cyprian or Italian, the best race in the world. They are very hardy, gentle, and industrious. Queens very prolific and large; they are sure to winter on summer stands. I did not lose one of these stocks last winter—all came out strong. Try them. All queens warranted pure. Safe arrival by mail guaranteed. Warranted queens, $1.00; choice selected, $1.50; tested, $2.00. Send for 20th annual circular. Remit by registered letter, check, or money orders on Salem, Mass.

6tfd HENRY ALLEY, Wenham, Essex Co., Mass.

SEND for my circular and price list of Italian Colonies, Queens, and Apiarian Supplies.

5tfd H. H. BROWN, Light Street, Columbia Co., Pa.

ITALIAN QUEENS! I am prepared to furnish pure queens at a low price. Untested, in May, $1.00; June, 90c; after, 80c. Send for circular.

CHARLES D. DUVALL,

4-9d Spencerville, Mont. Co., Md.

J. M. BROOKS & BROS'.

AMERICAN ITALIANS.

PURITY OF STOCK A SPECIALTY.

4-9 CIRCULARS FREE.

COLUMBUS, - BARTH. CO., - INDIANA.

CHOICE QUEENS FOR 1881!

Dollar Queens............. $1 00

Tested " 2 00

I guarantee satisfaction every time, or money refunded. No blacks in my neighborhood. All queens raised from A. I. Root's imported stock. Send for circular. HOWARD NICHOLAS,

4-9d Etters, York Co., Pa.

Full Colonies, Bees by the Pound, Nuclei, Fdn., &c.

I am prepared to fill orders for bees by the pound, nuclei (2 and 3 frame), full colonies of pure Italians. Also Cyprian Queens (Dadant's importation), and Italian Queens at A. I. Root's prices.

Given Fdn. a Specialty. Try it once, and see if you do not pronounce it the best you ever used.

E. T. FLANAGAN, Belleville, Box 819,

6-8d Rose Hill Apiary, St. Clair Co., Ill.

1881 ITALIAN QUEENS! 1881

Tested Queens.........$1 50

Warranted Queens.. 1 00

Cyprian Queens, untested 1 00

As most all the Dollar queens I sold last year were pure, I will warrant them this year.

J. T. WILSON, Mortonsville,

2-7d Woodford Co., Ky.

HEADQUARTERS FOR Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new circular. Address

1tfd DR. J. P. H. BROWN, Augusta, Ga.

KIND WORDS FROM OUR CUSTOMERS.

A B C received. I am studying diligently, and am delighted with it. LEM. FAW.
Plantersville, Grimes Co., Texas, May 17, 1881.

The sections to hand. Although not quite what I expected to get (dovetailed), yet a great deal nicer. They are the nicest sections I ever saw or used.
Burton City, O., June 22, '81. J. RUDY ROEBUCK.

Those hives, etc., came all right, and every thing about them is so exact and nicely fitted that it is nothing but fun to put them together.
A. A. BRADFORD.
E. Jaffrey, N. H., May 24, 1881.

The mincer you sent me is received O. K. I am now making "hash" of jerked buffalo. Many thanks. Please forward a "family" egg-beater for the inclosed. SUMNER A. KNIGHT.
San Diego, Tex., March 13, 1881.

Goods came all O. K., just as ordered. Thanks for promptness and dispatch. It certainly is a great pleasure to do business with a man who is prompt and correct. W. C. NEIL.
Strattanville, Clarion Co., Pa., June 18, 1881.

THE 16-IN. GEM PLANER, $75.00.

Planer received and running, giving tip top satisfaction. EDDY BROS.
Elsie, Mich., June 20, 1881.

[As there is some doubt sometimes about a planer for such a small amount of money, we have given the above.]

My last bill came to hand O. K. Thanks! I never flatter, but I am strongly tempted to compliment your style of "biz," square deal. You'll hear from me again perhaps before long. C. WATERHOUSE.
St. Martinsville, La., June 7, 1881.

[That is more than I deserve, friend W.; but I will try hard to come up to it.]

I have not written you since I received your book. With the help of it I wintered all of my bees, and they did well. The book you sent me I wouldn't part with for three times its cost. L. H. RANDALL.
Adams, Mass., June 8, 1881.

[And so, friend R., it would seem that I helped others to save their bees, even if I did not save my own.]

The hives, etc., arrived in good order in four weeks from the time I sent the order, which, considering season and distance, I do not think very bad. Freight charges very reasonable—only $1.13 on 110 lbs. I was surprised at getting so large a bottle of good sewing-machine oil for 5c, just what we pay 15 or 20 for. BURDETTE HASSETT.
Bonair, Howard Co., Ia., May 31, 1881.

The queen arrived, I believe, about the second Saturday after I ordered, all right; also $1.25 from you. Many thanks for your kindness, getting her to me from some one else if you could not furnish her. C. W. MCINTYRE.
Silver Creek, N. Y., May 16, 1881.

[Why, this is refreshing, friend M. We almost always get a big scolding when we have to send orders elsewhere to be filled.]

My bees are on a big "boom," storing honey from alsike clover. One colony (queen bought of you, and introduced last Oct.), has stored nearly 100 lbs., and are at work as if they were not half through yet. I opened the hive to-day and gave them the 2d story instead of the ½ story case, and I don't think they even stopped work. I would not take $20.00 for that queen. F. W. WILDER.
Forsyth, Ga., May 14, 1881.

The bees are here all in good order. Please accept thanks. I am well pleased, and have the first bees of the kind here that I know of. I received the bees on Monday, the 6th, and they are at work all right. I found only 9 dead bees in the box. Your way of packing is nice, and your goods are very good. They are far ahead of any thing that ever was here in the bee business. T. C. KERR.
South Salem, Ohio, June 8, 1881.

I can handle my bees very well, but they are bound to stay in the wrong place, and won't drive worth a cent; please send a smoker by mail, and oblige. H. F. FLANDERS, P. M.
Nashua, Putnam Co., Fla., May 16, 1881.

[I guess that is the way with all of us, friend F. "They are bound to stay in the wrong (?) place."]

The goods arrived to-day in good condition. The only wonder is with me, how you can sell so nice goods so cheap. The smokers are neatly made, and all the 5-cent articles are worth twice the money, especially the dictionary at 15c. It is cheap at 30c. I guess I will have to start a little novelty store, and order a cart load from your counter store. Bees are doing splendidly. Am increasing very nicely.
Winchester, Ind., June, 1881. J. H. THORNBURG.

GLEANINGS AS AN ADVERTISING MEDIUM.

The basswood is in full blast here, and we are full of business now. The two small ad's you inserted in GLEANINGS for me brought me more than I could attend to. I have refused orders for 100 lbs. of bees, or more, already; and advertisements I put in GLEANINGS over one year ago I have not heard the last of yet. When will the end be?
A. W. CHENEY.
Kanawha Falls., W. Va., June 18, 1881.

The A B C came the 21st, nicely packed with its neat guard, for protection in the mail-bag. Having inspected its outside, and pored several hours over its contents on various points of present interest, I must express my great satisfaction at every thing in it and about it. It is thorough; I suppose I might say it is like its source—radical. I like your plan of incorporating new matter in new editions, and have been interested in Mr. Doolittle's notes.
New Castle, Pa., June 22, 1881. R. A. BROWNE.

HOW IT PAYS TO ADVERTISE IN GLEANINGS.

I am needing queens and bees now more than any thing else. I received such a number of orders a few days since for nuclei, queens, and bees, it made my head dizzy for a few moments—am now considerably behind, and if I have a surplus of queens and bees, will most assuredly advertise in GLEANINGS, as I am *satisfied* it has been an advantage to me.
W. P. HENDERSON.
Murfreesboro, Tenn., June 18, 1881.

The bees arrived on Thursday all O. K. The express charges were liberal. Our way of hiving them was to open the wire cloth on one side and set them in the upper story, and lift the frames out and put them in place, and then shake the remaining bees in front of the hive. They formed a line very soon. I examined the queens to-day, and they were both laying. The bees are working on the foundation finely. I think those chaff hives can't be beat. The smoker works finely. Your mode of packing is excellent. J. R. TYGARD.
Pittsburg, Pa., June 4, 1881.

The "horse book" to hand at last safely; also your postal card, telling me I could send you 13c. for the book, as my former remittance of 25c was probably lost in the mails, etc. Do you think I could have the assurance to send you only 13c for the book when the loss of the money you had nothing to do with? Not much! can *I* do such business? and I would, in a friendly way, advise you to no longer keep up that system of *losing half*, where the sender of money says he has sent you only such and such an amount. Do you not see, my friend, that it *might* tempt some of us? Who knows but the temptation may be the first step to crime? Business! business! business! old friend. I am truly your well-wisher.
Wilmington, N. C., March 5, '81. R. C. TAYLOR.

I do not want GLEANINGS stopped. I have had four times my money's worth already, and I will try to keep you in "shinplasters" along. They seem to be very scarce—hardly any in circulation. I am only amazed at your wonderful management of bees. Truly, all created kind seems to be subject to man. I have saved 3 swarms out of my 15, and my neighbor has saved 1 out of his 20. I can not fully understand all your management. G. A. LEGGETT.
Schodack Landing, Rens Co., N. Y.

[Thanks, my good friend; but to tell the truth, I do not understand "my wonderful management" either, especially the part that came in last winter. I presume there is a chance for us *both* to live and learn yet. Eh?]

THE PROFANITY CARDS.

You must be a queer man. I think to print Mr. A. T. M.'s cards is enough for you to do instead of furnishing them free. Inclosed you will find two stamps to pay postage on a few of those cards.
W. T. WILLIAMS.
Burrsville, Caroline Co., Md., June 9, 1881.

[Why, I just like the fun, friend W. George (our job printer) has printed one big lot, and they are sold (yes, *sold*, even if we do have to trust the Lord for the pay and postage), and he is now at work on a larger and nicer lot. I feel as much pleased to see them go, as I do to see the well out in front patronized. By the way, we have had plenty of water all the time, though many other wells have gone dry. One pump was worn out, but we now have a much better one. Don't be backward in calling for the cards, if you think you can use them; and, good friends, shall we not have lots more pumps over our broad land? Can we not at least use this kind of inducement to keep our boys from drinking and swearing?]

KIND WORDS TO OUR CUSTOMERS.

PLEASE, friends, let me once more beg of you not to send back goods until you have first written. A package of tin bars was sent one of you, with other goods; but the clerk, in making the bill in a hurry (as we often have to do at this season), charged $1.25 for them instead of 25c, the proper price. Well, our customer sent them right back *by express*, saying we should give him credit for them unless we could put them in at the advertised price; if we could do so, send them back again. Very likely he was a little angry; but why in the world could he not have taken a postal, and quietly written,—

"Brother Root, you advertised those tin bars at half a cent apiece, and have charged me *two and a half cents* each. Shall I send them back, or will you stick to your price list? They are subject to your order."

We should probably have replied,—

"*Half a cent* apiece, friend ——, *of course*. We really beg pardon for making you so much trouble, and hasten to correct the blunder. Did it not occur to you we could not mean to charge such a price for a little strip of folded tin? We are very sorry you did not go right along and use them, knowing we would make it right."

Why should we hold each other off at arm's length all the time? Most of you know me by this time, and you know I am ready to bear losses from the consequences of misunderstandings, even when I am not to blame; but it is one of my hardest trials to keep from saying "won't" to those who make such precipitate haste in sending things back by express before they have told what the trouble is.

THE Mr. Woodward, mentioned in Humbugs and Swindles, page 81, Feb. No., has been found, and through the influence of good, earnest friends, has paid up the whole indebtedness, principal and interest, and stands on his feet a *true man* again. May the Lord be praised for so much.

MULTUM IN PARVO.—No. of subscribers to-day, June 29, 4184. Many whose time expired with June have not renewed.——Orders for queens are all filled at this date, and orders for bees with queens, up to within ten days; orders for hives and supplies of every kind, up to within four or five days, and are constantly kept so.——For new counter goods, send for our July price list. We have now a *printed list* of over 50,000 of our customers in all parts of the world, to whom a price list is sent once a year. If you are not in it, drop us a postal, and you will be; and if you want a late price list before the year comes around, drop us a postal any time. This list has cost me over a thousand dollars, and it costs $500.00 for postage alone every time we mail them.

HOLY - LAND & CYPRIAN QUEENS!
Raised in separate apiaries 5 miles apart. Untested Queens of either race this month, $1.50.
H. B. HARRINGTON, Medina, O.

GLEANINGS IN BEE CULTURE.

DEVOTED TO BEES AND HONEY, AND HOME INTERESTS.

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A. I. ROOT,
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NOTES FROM THE BANNER APIARY.

No. 20.

MAKE THE BEES PAY.

HUNDREDS of bee-keepers this season found themselves the possessors of empty hives and combs—but no bees. Some of them will give up the business entirely, while others will buy a few colonies, or else buy bees by the pound, and will go bravely to work to build up again. I suppose that most bee-keepers who lost bees last winter, and who have obtained a few bees with which to make a start, will bend their whole energies to making their bees increase as rapidly as possible, and will not attempt to obtain any surplus honey. If one can *afford* to lose all of his bees *next* winter, this course may be all right; but would it not be a safer plan to obtain *some* honey, and make the bees pay a profit *this* year? I know it is very tempting—I have felt the impulse more than once—this idea of building up a large apiary, and then doing some thing grand—get honey by the ton, for instance. I know of a bee-keeper who has kept bees a good many years, and thoroughly understands the principles of bee-keeping, and yet I honestly believe that, if he had kept a "bee account" for the past ten years, it would show that his bees have been little else than a bill of expense. He has never obtained very much honey, but has worked mostly for increase. Two or three times his colonies have numbered 75 or 80, and he was intending, the next year, to do some thing "big;" but a disastrous winter followed each time, leaving him with few or no bees. Would it not have been better if he had secured a good crop of honey each year, and been contented with a moderate increase? Then there was one other circumstance that contributed largely to the cost of his bee-keeping business: he invented, manufactured, and transferred his bees into a new style of hive at least as often as once in three or four years, setting the old hives one side as useless lumber. He also invested considerable money in modern improvements. Now, if one is a merchant, doctor, lawyer, minister, or some thing of that sort, and keeps bees merely for amusement or recreation, this kind of "doings" might be put up with; but the majority of us keep bees because we think or *know* that there is money to be made at the business; and if, after a series of years' faithful work with bees, any one finds that it does not pay, my advice would be to quit the business.

Many of us (perhaps I had better say *I*) imagine that we could go into some other man's apiary and tell him where he was making his mistakes; but can we do the same by ourselves? It is so difficult to "see ourselves as others see us"!

If I should begin a season with a single colony, I should expect it to pay a profit *that* season; and if it had not at the close of the season, I should be very strongly tempted to sell, at some price, a colony of bees, in order to bring the balance upon the right side in the ledger. Don't think that I would advise you not to spend any money upon your bees; far from it; but be *sure* that it is going to be money well invested. Try all new things upon a small scale, and after you are satisfied that any thing pays, use it, even if it does cost money.

This is my fifth year at bee-keeping, and I have never made less than $15.00 per colony, while last season I cleared $25.00; but the loss of bees last winter reduced the profits to about $20.00 per colony.

Once more I say, *make the bees pay, or else don't keep them.* W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

To be sure, you are right, friend H., and it will be an excellent idea for a good many of us to make our bees furnish net cash enough each season so that if they do all die the next winter we shall not be out of pocket. Do this, and then don't let them die.

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ON THE PROBABLE CAUSES OF THE LOSS OF OUR BEES LAST WINTER.

BY L. L. LANGSTROTH.

YOUR heavy losses in bees affect me painfully. While I admire your cheerful spirit under such reverses, I know that the failure to winter your bees is much harder to bear than the mere pecuniary loss. I speak from a vivid recollection of similar experiences. Before I discerned what precautions were necessary for wintering bees successfully in movable-frame hives, I more than once found myself in the spring in a plight almost as bad as your own. I can fully indorse your explanation of some of the reasons why your reverses have been so much greater than those of some large bee-keepers in your neighborhood. I often met with great losses when my apiary was managed chiefly for the sale of Italian queens. At the close of a poor honey season, my apiary often had many weak colonies. The temptation to winter every such stock which had a good queen was very great, as the demand at high prices for such queens in the spring was usually greater than could be met. It was only the fact that my location was a poor one for honey, and that I could get large prices for nearly all the queens that I could raise, that at all justified my course. If in addition to the queen business, the selling of bees quite late in the season by the pound had been practiced, the condition of my apiary after an unusually cold winter and late spring would probably have been very similar to that of your own. I give some comments on your replies to questions which I sent to you.*

1. "Did you spread the combs further apart?"

"I did not. Although recommended, so far as I know it has been mostly abandoned."

Mr. Harrison, of Buffalo, first called attention to the importance of keeping the combs in which the bees cluster for winter some ⅜ of an inch further apart than the natural breeding distance. In the old box hives there are usually spaces in which bees can cluster in much larger numbers than in movable frames properly spaced for the working season. In the very cold winter of 1872–'3, I wintered in the open air in hives only ⅞ thick, until February,† a number of stocks which were estimated not to have over two quarts of bees per hive. All the bees of a hive were placed between two combs full of honey, which were kept nearly three inches apart, and they formed a single cluster, shaped like a ball. If the combs of these stocks had been left in their summer position, no amount of chaff used in any fashion could have saved them. Mr. J. S. Hill, of Mount Healthy, O., who wintered last season 112 stocks without losing one, and who has wintered on an average 80 stocks a year since 1868, without the loss of one, spreads the combs.

2. "Did you make winter passages in the combs?"

"Perhaps half of the combs have winter passages. I have never been satisfied it made any material difference."

In this you differ from those who have had the best success in wintering bees. Mr. Hill, for instance, never neglects this point, and I am satisfied that the power of passing from comb to comb through the heart of the warm cluster, besides saving the lives of many bees, greatly encourages early breeding. In the old box hive the holes around the cross-sticks for the support of the combs give the best of winter passages.

3. "Did you place burlap or any other non-conductor of moisture over the frames?"

"We used burlap, wood mats, and enameled sheets, but saw no difference in favor of either."

Whatever the material used for confining the bees below, it should, as a matter of course, permit the ready escape of superfluous moisture. With weak stocks in very cold winters, this is a point of great importance.

4. "Did you give the bees a good space above the frames for clustering in?"

"A part of them, perhaps nearly one-half, had an empty frame, or a frame of stores placed over the cluster. Our Holy-Land bees went into this upper chamber and starved, having plenty of stores below."

Reference to the back volumes of *A. B. J.* show that Bickford's quilt (afterward improved by you) is credited by him to the successful experiments which he witnessed in my apiary. I discarded the honey-board in wintering, using, instead, woolen rags, old carpets, etc., through which all superfluous moisture could pass, while sufficient animal heat was retained, explaining at length that the principle was the same as using suitable bed covering to keep ourselves dry and warm in cold weather. I have always regarded the elucidation and application of this principle as a great advance in practical bee-keeping. The letters of Huber, published only a few years ago, show how much his bees suffered from dampness; and before I so fully expounded my ideas in the London *Journal of Horticulture*, our English friends found that they could not use wooden boxes with any satisfaction. My plans, as seen by Mr. Bickford, and very fully described in *A. B. J.*, not only gave this free escape of moisture without too much loss of heat, but especially provided an ample warm space for the bees above the frames, so that the cluster could contract or expand at will. This saved the lives of many bees which, in very cold weather, even with the best winter passages, often failed to regain the central cluster, and died because they could not keep up the necessary heat.

I believe that, even in such a winter as the past one, that with winter passages, combs properly spread apart, and a warm clustering space for the aforesaid purposes, bees could be better wintered in the open air in hives ⅛ of an inch thick, than with any amount of chaff above, around, or below them, where these precautions are ignored; for in sunny weather such thin hives will warm up so as to dry out and allow the bees to reach their stores, while the chaff hives may remain cold and damp as a cellar. I will send you, in due season, an unpatented device used by Mr. Hill, for securing a warm nest above the clustered bees, which answers the end better than any one I have yet seen. Is there a man in all our northern country who can claim equal success with Mr. Hill in wintering bees? It hardly need be said that he is a pattern of skill, energy, and promptness. He has made his bees pay in a region where I think it is ordinarily more difficult to secure one pound of surplus than two in the more favored northern locations.

5. "Did you feed your bees for winter with a mixture of grape and cane sugar?"

"Only a part of them, as I stated on page 278."

I think your losses were owing in part to your use of grape sugar, even although your candy contained but one part of it to three of best granulated cane sugar. It is not at all necessary that grape sugar should contain any impurities to make it a very hazardous food in such a winter and spring as we have just had. From its low sweetening power as compared with honey or cane sugar, your bees which used it were forced to eat more than they otherwise would have done, and thus to suffer from a greater accumulation of fæces. You say, "Had our usual April weather come on, we should probably have saved about 50 colonies that we lost." Is it not highly probable that, with the weather just as it was, you might have saved many of those colonies, if they had not been forced to succumb under the

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* Friend L. wrote, before writing this article, asking five questions. I answered briefly, and his comments are on these questions.—ED.

† Advised by the Signal Service that a cold wave more severe than any previous one was coming, the bees were removed into a cellar.

excess of fæces produced by the undigested starch which so largely enters into the composition of grape sugar?

In noticing my account of Mr. D. McCord's heavy losses from wintering his bees on a syrup largely made from grape sugar, you express surprise that he "should have done so foolish a thing;" but you published last fall his account of the mixture he proposed to feed, without a word of disapproval or caution. You also say, in June GLEANINGS, "I have never advised the use of grape sugar for wintering." Surely, friend Root, your memory is at fault in this matter. In GLEANINGS for October, 1880, p. 489, Mr. Crowfoot, in a letter to you, says, "Will you please tell me what you would feed bees that have got just about half enough honey to carry them through the winter? * * * I have about 700 swarms of bees, with about half enough honey to winter on." To this you reply, "If I had 700 colonies with half enough stores for winter, I would supply the deficiency with frames of candy made of coffee A and best grape sugar in about equal proportions. If it is less trouble to you to feed it in the form of syrup, make the syrup as described in the A B C. * * * They may die with this feed, but they may also die with natural stores, as past reports fully demonstrate; but I think, if properly done, such stores are just as safe for winter as natural stores. * * * * Very likely the grape sugar that is made now would be safe of itself; but to be sure of being on the safe side, I would use half coffee A, as above."

Certainly you have sometimes cautioned your readers about grape sugar as a winter bee-feed; but there can be no doubt that, as in your reply to Mr. Crowfoot, you have fully indorsed it as a safe food to enter at least one-half into the preparation of winter stores. When you review carefully all your utterances, I believe not only that you will admit this, but that, with the experiences of the last winter, you will condemn its use for winter stores so plainly that no one can mistake your position. Perhaps it needed such a winter and spring as we have just passed through, to *demonstrate* that no prudent bee-keeper can afford to use grape sugar as a winter feed in any proportions however small.

You say, "I am very sorry that grape sugar is used for bad or dishonest purposes; but even if it is, I can not see why this should be a reason why we should not use it while rearing queens, and bees by the pound." So enormous are the frauds practiced by the adulteration of our commercial sweets by grape sugar and glucose, that it seems to me that bee-keepers should lend no countenance in any way to those who make them. Already such suspicions have been awakened as greatly to curtail the sale of pure honey at remunerative prices. On selfish motives alone, those who deal in honest honey, and those who have the control of our bee journals, should set their faces as a flint against articles made almost exclusively to be sold for bad purposes.

You say that the Buffalo Grape Sugar Co. have produced a sugar which "is as pure and simple a sweet as the best grades of maple sugar." Have you any warrant for such an assertion? and even if you had, is it right for you to call down a blessing from heaven upon a company which is making such enormous profits by selling their products almost exclusively to men who, by their adulterations, are cheating the poor man in his honey, candies, syrups, and sugars? If ever grape sugar and glucose are made as pure as the best maple sugar and syrup, and it becomes desirable to mix them with our other sweets, let them be offered at reasonable prices under their own names, so that we can do our own mixing; or let the mixtures be sold as such for what they are worth.

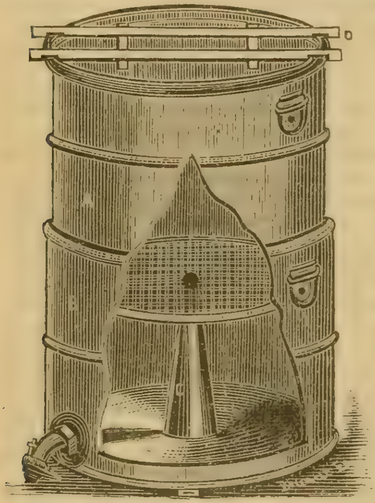
Friend Root, you have gained a host of warm friends by your candid admission of mistakes into which you have fallen, and by your readiness to notice improvements of others, even when they have superseded what has cost you much time and money; nor have you, from a false pride of consistency, been wont to persist in advocating what time has proved to be erroneous. It seems to many of your best friends, however, that on this grape-sugar question, you have acted under the influence of prejudices which have strangely warped your better judgment. We can not question your sincerity, and can only hope that, when you weigh well this matter in all its bearings, you will feel that you ought to enlist the great influence of your name and journal against a business which, as it is now conducted, enables unscrupulous men to commit such monstrous frauds. Your sincere friend,

Oxford, O., June, 1881. L. L. LANGSTROTH.

May the Lord bless you, my good kind friend, for your frank and faithful way of taking your old friend to task. I certainly had forgotten giving the advice you quote, and felt sure that I had never said any thing favoring grape sugar so strongly for wintering. At the same time, I have no reason now for thinking it any worse than stores of honey. More than ten years ago we had abundant proof of the advantage of sealed stores of coffee A sugar syrup over natural stores, and the past winter has abundantly corroborated it again. I have always sold grape sugar under its true name, and, so far as I know, so also have the manufacturers of whom I bought it, and also those to whom I sold it. If the experience I have had of the world is worth any thing, I am sure I am right in feeling that the unjust (and I might almost say foolish) prejudice against grape sugar is going to pass away, and it will come out and stand as safely as a valuable product from Indian corn, as does starch. Evidences of this are now found scattered through our papers. Notwithstanding this conviction, as grape sugar seems, without question, to "make many of my brothers to offend," I will, for the present at least, drop it. I feel sure we shall winter better next winter, but I think it will be greatly due to some thing more important than the substitution of granulated sugar for grape; viz., giving the bees more of my brains individually. As an excuse and apology to our readers for the inconsistencies friend L. has so kindly pointed out, I would say that I am getting to have a great business on my hands. In my zeal for getting boys and girls to work (that immortal souls may be saved), a great traffic has opened in supplies. Brains are so much needed at every turn, and so many points are gone over in a single day, that I am no longer able to remember what I have written and advised, as I did a few years ago. In the next edition of the A B C, and also in our price list, I will, at least for the present, advise against the use of grape sugar.

ANOTHER AID FOR HONEY-EXTRACTING.

IN Dadant's excellent little pamphlet on harvesting, handling, and marketing extracted honey, he gives an engraving and description of an uncapping can, which we think must be a very handy implement. Friend D. has kindly loaned us the cut, and we present the machine to our readers.



DADANT'S CAN FOR UNCAPPING THE COMBS, WHILE EXTRACTING.

The engraving makes every thing so plain, a description is hardly needed. The strips across the top are to rest the combs on while the operator shaves the caps from the cells; and as the caps are caught on the wire cloth half way down, every bit of the honey has ample time to drop to the bottom. This honey that comes from the cappings you will find the thickest and nicest of your whole crop. To keep the wire cloth from sagging under so great a weight, we use the same inverted cone that is used for holding the bottom pivot of the extractor, when an extra amount of room is needed below the revolving frame. The machine is really composed mainly of two short extractor cans, and we can furnish them of two sizes; viz., 17 and 20 inches. The prices will be $5.00 and $6.00 each respectively. Friend D. states that the large size will hold the cappings of three days' extracting. After they are drained, a jet of steam on them makes it into our new steam wax-extractor complete. "Did you ever?"

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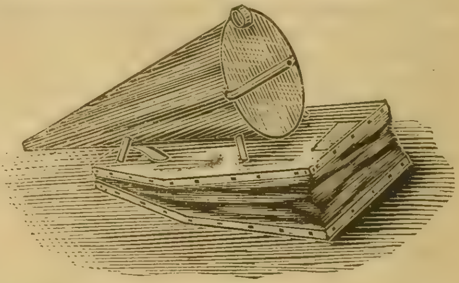
CLARK'S COLD-BLAST SMOKER.

OLD THINGS SOMETIMES BETTER THAN NEW ONES.

DID it ever occur to you that I am sometimes a trifle awkward and headstrong withal? Well, it has often occurred so to me, and especially about this Clark's smoker. If you will turn back to the March GLEANINGS of 1879, you will find an engraving of the original Clark smoker, and the following sentence in friend Clark's letter by way of explanation:—

> It works beautifully; the draft of air across the top of the fuel causes it to burn clear and slowly, and leaves very little creosote. I find that rags burn, but perhaps one-fourth as fast as where the air is forced up through the bottom. Its convenience as a "breech-loader" is an item in its favor, also that it retains its position while in use. The Simplicity always seemed to me a little awkward, on account of being obliged to turn it bottom up so often, while in use.

You will see from this that he never intended the smoker to stand on end like the others, but to be placed as in the cut below when not in use. The draft then is through the nozzle, and the smoke comes out through the crevices where the door to put in fuel is made. Well, it took me nearly two years to get this into my head, and to understand that my improved Clark smoker was not as good as the unimproved original. During the last two months I have been experimenting, and testing smokers of all kinds, right among the bees, to such an extent that some of the boys say I have smokers on the brain; and my wife says I smell of smoke so that she can hardly sit within a yard of me. (It's only rotten-wood smoke, dear friends.)



OUR FIFTY-CENT SMOKER.

Just take it in your hand, nozzle downward, and push the door open with a piece of fuel. Fill up the cone with any kind of wood you can get hold of,—hard-wood blocks, or wet and soggy sticks, only so you put a little dry wood and shavings on top, to start the fire. When full, close the door nearly shut, and scratch a match on the piece of sandpaper right near the door. Now, while you lay the match right across the shavings, work the bellows, and the blaze will go right down and light them. Blow them into a good blaze, and open your hives and go on. If you want to see what the smoker will do, work the bellows while you hold it with the valves upward, and in a very little time you will find the fire-pot red hot, and the volume of smoke enough to drive a whole family out of doors, let alone a single hive of bees. Although both fire-pot and bellows are larger than any thing I have ever seen in the market, we sell the whole for only 50c and 40c where you take a crate of five. If a four-quart tin pail sells for a dime, why should not a one-quart smoker sell for half a dollar? Are the modern low prices to things never to apply to bee implements at all? We do not fill the above smokers with rotten wood, because they burn any kind, and therefore the postage is only 20c, instead of 25.

P. S.—I really don't know any way to make these smokers "go out," unless you "duck them under water," and then you would have to get some dry shavings to start it again. H. put one in his buggy, and it got red hot, and burned up his rubber coat. May be it was because "Patsy" went so fast. Oh, yes! I have made another great invention. It is a peck basket full of rotten elm wood. We sell the peck of wood for 10c, "fling in" the basket, and "four double-handfuls" of fine dry shavings besides.

TAKING BEES ON A PICNIC, DOWN SOUTH, AND THE PLEASURES (?) THEREUNTO PERTAINING.

A TIMELY WARNING TO THOSE WHO PROPOSE TO TAKE BEES TO FAIRS.

“GOOD MORNIN'!”

“Hallo, Lamb, how?”

Neighbor L. had come over to consult me upon taking a colony of bees to a picnic at Point Caswell, some 15 miles from us.

“Well, I'll take a colony. Oh! I'll take my imported queen's stock, and, don't you know those tar heels will just stare at a Simplicity bee-hive filled with them ‘golden insex’?”

“You bet,” says I.

The next day he had his bees smuggled on board the steamer, and at an early hour was on the picnic grounds. Some 3000 people were present during the day, and neighbor Lamb just spread himself—like the turkey hen that sat on 68 eggs. Oh yes! he gave the rustics “information” that was not only new to them but—to me too. He expatiated wildly upon the old “king bee,” as the people around constantly styled the queen. He exhibited the bees frame by frame, without veil or smoker, which elicited great applause and clapping of hands.

“Jerusa*lam!*” said one “yaller-jeans” checkered seven-footer; “mister, you jest hold on till I run and git Sal and mammy.”

When mammy and Sally did get there, you should have heard the “Ohs” and “Jerusalams.”

“Now you jest look a yonder, Sally Mariar.”

“O mammy! I see; did you ever?”

“Say, mister, what mout your name be?”

“My name is Lamb,” modestly replied neighbor L.

“Them ain't bees, are they?”

“Oh, yes!” said friend L., just then rubbing off a “dyspeptic” bee from under his right eye, but leaving the sting behind.

“Wal,” said a little cross-eyed man on the outskirts of the crowd, “*I* could handle them just that way myself. My par used to have 60 gums. I don't like these new-pattern fixin's for bees.”

“Say, mister, what'll you ax fer that gum and bees?” says another.

“Ten dollars,” says L., wiping a bee, but leaving the most important part, the sting, on his left eyelid.

I had told Lamb, previously, if the bees stung him he must take it cool, reach up, oh so gently! and brush the bee off by gliding the hand over it, and thus remove it without attracting attention. “For,” says I, “what would the dear people think to see a live bee-man jumping, slapping, and shouting like mad, as you do when stung at your apiary sometimes?”

“All right,” says he; “I'll bear it; but I *do* hope the bees will act pretty.”

The inquirer seemed perfectly amazed. “Ten dollars! why, feller, I only meant that *one* gum, not all you've got at home.”

“Well,” says Lamb, who by this time I could plainly see was getting *worried*, “I just mean what I say; this Root Simplicity bee-hive, with frames, combs, honey, and all the fixin's—even the alighting-board and bees—can be had for—phew! confound that bee! Run here, somebody, and get it out of my eye.”

“How much?” says the fellow, still persisting.

“Five dollars!” yelled Lamb, who had severely jarred the combs, and those “insex” were “playing,” oh so beautifully! among his raven locks.

By this time the would-be purchaser had come a little nearer the bees, and, zip! one took him on his lengthy nose. That settled the purchase. He didn't run; oh, no! he flew, shouting “dingnation! whoop! take 'em off me! dod rot yer hide, le'me loose,” all the while slapping wildly with his hat.

This created a fearful stampede, and the great (?) Carolina bee show closed for want of an audience.

After giving several dodging inquirers the address of GLEANINGS, and its delightfully cheerful editor, Neighbor L. wandered off into the darkness of the forest, and sat chewing the cud of discontent the remainder of the day. After awhile I found him.

“Say, neighbor, how's picnicking with bees?”

“Oh, *blast* the picnic! blast the *bees!* Say, won't you please write Root, and tell him to send down a thousand provisioned pound cages, and I'll ship him millions of bees and pay the expressage on 'em myself, and thank him to take the plagues.”

“Take it cool; you'll feel better when your face goes down,” says I.

I had to make tracks then. Because the young ladies laughed at his big face coming home, he went below and tried to persuade the engineer to blow the “blasted old steamer sky high;” but he wanted time to get his bees off the boat before this catastrophe occurred.

P. S.—I saw neighbor L. this morning. He looks better, and has changed his mind. He says, only for those “tar heels” every thing would have been O. K. R. C. TAYLOR.

Wilmington, N. C., June 10, 1881.

HOW FRIEND MILLER CARES FOR HIS EMPTY COMBS, ETC.

ALSO SOME THING ABOUT HIS TUSSLE WITH THE DWINDLING.

I HAD a large number of empty combs this spring, some of them very nice ones, and I was quite anxious to save them. I had no room, as perhaps I shall have this fall, in which to brimstone them, and at any rate they must be brimstoned *very* heavily, or some of the large worms will still live. I looked over each comb carefully, and with the point of a pen-knife picked out all the worms I could find. I did this two or three times, but it was a great deal of work; and the best I could do, there still seemed to be worms left. I thought of putting them in supers over the hives containing colonies. In that case the bees would take care of them, but it would waste the heat of the colony, allowing the warm air to ascend into the super. Then I took the contents of a hive,—frames, bees, and all,—and put into a super, filled up the hive with empty combs, and set the super containing the colony over the hive. Thus the bees were obliged to pass through the hive of empty combs in going to and from their brood-nest, and the plan has worked to my great satisfaction. In some cases I have set a super of empty combs on the hive of combs, and then set the super containing the colony over all. Of course, I have used the strong colonies for this purpose. If the combs contained honey, as some of them did, I don't know of any better place for them.

You say you want to see the old veterans own up how helpless they are in the matter of

DWINDLING.

I don't know whether you call me an old veteran or not. I have been keeping bees for the last twenty years, but at any rate I am ready to make my *own-up*. Until this year I have never known any thing about dwindling, except what I have read. This spring, however, a number of colonies were very weak, and, in spite of all my nursing and feeding, stayed weak, and gradually grew weaker. I watched them carefully to see if I could find out what the trouble was. Were the queens at fault? Hardly, for they laid eggs in more space than the bees could cover, and in some cases two or three eggs in a cell; and subsequent events proved that at least some of them were good queens. Gradually the queens began to be missing, and I concluded to double up. In one case I united 12 of them in one, saving the queens. This I certainly thought would make a fair colony; but, would you believe it? in a few days it seemed just as weak as any one of them had been singly. They had a little patch of brood two or three inches square in two combs, sometimes in three; and so long as I gave them no help in the way of young brood or bees, their patch of brood seemed to diminish rather than increase. It looked a little as if they were all old bees, and either could not or would not take proper care of the brood. I kept along 9 of them till the latter part of May, and then, by giving sealed brood or young bees, they picked up heart and showed the queens to be good.

Since writing the above I have read in A B C about dwindling, and am not so certain that mine was the regular affair. At any rate, I know that in future, if I have any very weak colonies in the spring, I shall not try to nurse them along for the sake of saving the queens, but do as I did with a few this year. I shall unite them with *good* colonies, not with other dwindlers; cage the queens and give them to a good colony to care for till I can take a frame or two of brood and bees from flourishing colonies to form a nucleus for each queen. The colony that is caring for these caged queens must also have its own queen caged, for I lost a nice queen by allowing her to remain free in a hive where others were caged.

In caging the queens I ran short of cages, and put two queens in one cage. They stayed together in the same cage several days without molesting each other, and each one now presides in a flourishing colony. Do old queens ever fight?

I have just been out to look at my Cyprian and Holy-Land queens, raised by you or neighbor H., introduced 3 or 4 days ago, and they are doing nicely. They commenced laying within 24 hours after they were put in the hives. The Cyprian is a handsome bird, and the Holy-Land, although not of so handsome color, is of beautiful form. As I looked at them and thought that, only a few days,—indeed, not many *hours*, before,—they had been hundreds of miles away, and were now perfectly at home in their new domicils, I thought of the various strides in bee culture, and said to myself, "What further advance may we not expect in the next ten years?"

Marengo, Ill., June 13, 1881. C. C. MILLER.

Your plan for making the bees care for empty combs, friend M., is an excellent one; but it seems to me that, to do it quickly and to advantage, you need those same movable-bottom hives you said you would not have about, last month. The idea is similar to the one I employed in having the bees take care of a hive when the combs had fallen down. Put a good set of combs above the melted-down mass, with brood in one or more of them, and the bees will carry all the honey from the crushed combs above, and then you can straighten out and fix them back in the combs.—Your experience in uniting, to save dwindling colonies, agrees with what Doolittle wrote a short time ago, and, I guess, with the experience of the most of us.—Yes, the old queens will fight. I have caged them on purpose to see how they would manage. If you kept two in one cage for several days, you have demonstrated some thing new, I believe. This reminds me, that a few years ago a friend in Michigan declared we sent him a cage without a queen in it, and two queens in the accompanying cage. I told him it was an impossibility, for, even had we been so awfully careless, it was impossible for them to live thus through the trip. If he sees this, will he please accept my apology? He may have been right, after all.

APIS DORSATA!

CAPTURED AT LAST!

WE copy the following from the Ceylon *Observer*, of Friday evening, April 8, 1881, which we presume was sent us by our friend Frank himself:—

CEYLON BEES:

COLONIES OF "APIS DORSATA," THE MOST WONDERFUL BEE IN THE WORLD, TAKEN BY MR. BENTON IN THE KURUNEGALA JUNGLE.

We are glad to say that Mr. Benton has at length been successful in capturing the "Apis dorsata" (Sinhalese "*Bambara*"), which he describes as "the most wonderful bee in the world." Mudaliyar Jayetellike secured a party of Sinhalese bee-hunters who guided Mr. Benton to the Bambaragala, a mountain rock some 30 miles from Kurunegala in the jungle, and there, after a very interesting and exciting experience, which Mr. Benton will probably relate for the benefit of our readers, two colonies of the "*dorsata*" were secured. So much importance does Mr. Benton attach to his work here, now that he has seen this bee, a splendid honeymaker, that he is to postpone his departure to Cyprus for another fortnight, returning to Kurunegala to-morrow morning. He has left specimens of the new bee in spirits which can be seen at our office. The Sinhalese were much astonished to see the way in which Mr. Benton handled bees which, wrongly used or blown upon, are so savage that they will pursue the offenders great distances, and Mr. Jayetilleke declares that he has got more practical information about bees from Mr. Benton in a week than he had from all other sources in many years.

Very good; but, friend B., why in the world don't you tell us plainly whether they are really an inch long, and that their stings are good for toothpicks?

Later:—From another part of the paper mentioned, we find the following:—

Bambara (Apis dorsata) is a large bee prettily marked with yellow and black, and makes a very large quantity of honey, varying from two to three gallons. It constructs its hive, a large thick comb about 3½x2½ feet, in a peculiar shape, attaching it to the branches of very lofty forest trees, or securing it to the ledges of high rocks with its two ends fastened up, and a narrow opening in the middle between the branch or rock which supports it. It is with great difficulty got at by bee-hunters, and only by those used to such kind of work. I have never heard of any attempts being made by natives to domesticate them like the common honey-bee of Ceylon, and it is my impression that any amount of exertion to domesticate them will prove fruitless. *Kana Veya* is a tiny bee belonging to the *Trigonæ*, producing a small quantity of honey which it makes in the hollows of rotten trees and crevices of rocks and dilapidated buildings. I have seen and examined a great many of these combs, which are irregular in shape; they never yield more than a teacupful of honey, which has a rather acid taste, and is used only for medicinal purposes. Since writing the above I have been taken by surprise by Mr. Benton, a good authority on bee culture; his visit to Kurunegala is to hunt up the (*Bambara*) Apis dorsata. A narration of his valuable experience has afforded me much information, and I indulge in the hope that this will enable me to compete with my difficulties more successfully in the future. A person of Mr. Benton's acknowledged ability and experience would do much for Ceylon in opening up a branch of industry so easily conducted, and yielding so large a return, but of which the natives are so lamentably ignorant.

Juvenile Department.

I AM not a bee-keeper myself, but my father is, and in the summer time he gives me five cents every time I see the bees swarming; that is, if I see them before anybody else does. But I thought sure I was going to have a swarm last summer. I had been up to my uncle's, and on my way home I saw some thing that looked like a large swarm just in the edge of the woods; so I hurried home and told father about it. Then he and I took the hiver and a hive, and went up where it was. Father told me that if it was a swarm I could have it; but when we got up there it was nothing but a grapevine clustered together. So I did not have a swarm of bees after all. Father says that he has had bees nearly ever since he has kept house. When the bees sting mother it makes her sick, and sometimes she has to go to bed. It don't seem to cure father's rheumatism either. My brother used to keep bees too one time. He was out hiving a swarm of bees, and all at once he came up missing. We called and called, and after awhile we found him under a currant bush by the side of a bee hive, fast asleep. He said that he had just been eating a piece of honey. Father thinks lots of his bee journals. I have one sister. She has been sick for 4 years, and has not walked for two years. I am ten years old.

EUGENIE STEARNS.

Lima, Fayette Co., Iowa, Feb. 16, 1881.

Very good, Eugenie. You can let your sick sister read the book we send you, or read it to her, and let us all remember to thank God that we can walk, and are not sick.

Papa has three colonies of bees; he had seven last fall. What lived over are doing well. We have three Sunday-schools — in the morning and evening; I go to both whenever I can. I live in the country, and sometimes it is too bad to go.

CATTIE GOODY KOONTZ.

Tipton, Tipton Co., Ind., June 5, 1881.

Very good, Cattie. Take care of the bees and Sunday-school too, and God will bless your life and make it a good and happy one.

Mrs. Harrison is mistaken, for I do not work with bees. My papa said if I worked with them he would give me a hive, but not until I did. A good while ago, Josie Myer, my schoolmate, and myself joined a "bee convention," and went three times, when it broke up. I read of so many girls and boys of my size working with bees that I think I shall have to begin. I have a little cousin who goes out with my papa and looks at the bees, and he is not a bit afraid of them. I like the book you sent me very much, and I thank you for it. MABEL L. NELSON.

Wyandott, Kansas, May 13, 1881.

I am a boy 13 years old. We commenced wintering with 7 colonies. All were packed in chaff hives but 2, one of which was in a Simplicity, and the other in a box hive. One hive was mine, one mother's, and one Frank's (my brother.) Mother's died (in a chaff hive) with the dysentery. This is not a very good place for bees.

The way we dry corn is to put it in Hunter's steamer and steam until cooled, and cut it off the cob and dry it in the Zimmer fruit-dryer. I think boiling takes some of the sweetness out of the corn.

Poor "us," we can't get that smoker offered for quitting tobacco (and I am glad of it, because we don't use tobacco.) C. E. ISRAEL.

Beallsville, Monroe Co., O., March 8, 1881.

And so "mother's hive" died after all, did it, in spite of chaff?—It is a little sad that the boys who have never learned to smoke can't have a smoker free; but, my young friend, if you will read the Smoker Column of this month, and the Home Papers too, you may thank God that he has spared you the task of fighting these fearful temptations.

My pa has taken GLEANINGS for three or four years. I like to read the Juvenile Department and Mr. Merrybanks and his neighbor. I have one stand of bees. Pa has one. We had 30 last year; 10 of them died during the winter, and 2 this spring, and pa sold the rest. I go to two Sunday-schools—one in the forenoon and one in the afternoon. I don't chew or smoke, nor do I ever intend to. My pa has just got a new A B C book of you, and I am going to learn how to take care of bees. I will be 12 years old in July. The bees are gathering pollen very fast.

CHARLEY W. SCHÆFFER.

Corydon, Wayne Co., Ia., June 3, 1881.

May God bless you, Charley, in your good resolves! Somebody in New York City once advertised parrots that could swear, and the *Sunday-School Times*, in commenting about it, said it was their impression that almost all the swearing was done by "parrots." They meant it was done by boys and men who had not brains enough to do any thing for any better reason than that they heard it from some one else. I have been wondering if the boys who learn to smoke and chew do not do it much in the same way—because they saw some one else do it, without thinking at all, or trying to think, whether this mimicking, or imitating somebody else, would do good or harm. How is it, boys? Shall we live to imitate other folks unthinkingly, like parrots, or shall we have minds of our own?

I wrote a little letter which you printed in the April No., but the book you promised me never came, and I was so disappointed I wanted to write right away and let you know; but mamma said she supposed it was lost in the mails. At last she let me write. Papa has bought some bees, but they are not at home yet. I expect mamma and I will have to take care of them, as papa is away from home most of the time. Mamma says she thinks she will have to send for your A B C book, as she don't know any thing about bees. I have a little brother; he thinks he can help, but he is too little. He is only five years old. If you have forgotten to send my book, will you please send it? **ANNE SPENCER.**

Hockingport, O., June 6, 1881.

Why, I am real sorry, friend Annie; and to make up for your disappointment, we send you two books this time. Tell your little brother he is all right, and he can help too. If you all try you will be sure to succeed; and I know you will find lots of work that your five-year old brother can do. You didn't tell me what his name is. I have lots of boys and girls and men, and women too, to work for me; and when I find one who *wants to help*, he is often worth more than some who are "great big," who do not want to help very much.

I am 11 years old. I go to school, and read in the Fourth Reader, and study Second Part of Arithmetic, and Geography. I have got three head-marks and 28 perfect marks. I go to Sabbath-school, and I got a Bible for learning my catechism, and repeating it to Mr. Cleland, the pastor. I have learned the 23d Psalm. **GRACE McCRORY.**

Winchester, Adams Co., O., June 15, 1881.

Well done, Gracie. Even if your letter isn't about bees, it is a good one, and as it don't take much room we put it in. Stick to that 23d Psalm, and you will be good to take care of bees or any thing else when you grow up.

I am a little girl 8 years old. My pa takes GLEANINGS, and I like to hear it read. I like your cartoons too. I found a swarm of bees on the hedge a year ago, and in the spring pa bought 6 more. We have got 41 colonies now, mostly Italians. My two brothers take care of the bees, and I help them some. I got stung on the hand once, and you may guess I had a fat hand; but it didn't hurt much. I am my mamma's baby. My papa's name is A. B. Kirk. My pa is a preacher. I like to go to Sunday-school. I like to go to school too. I read in the Fourth Reader, and I spell and write. I am in an arithmetic class too. **EMMA KIRK.**

Columbus, Cherokee Co., Kan, May 13, 1881.

Why, Emma, that is a first-rate letter for an eight-year old "chicken," and I should think you were getting along pretty well in your studies too. Be sure you do not neglect your health in studying so much. Little girls eight years old need lots of air and sunshine to make their little bodies grow; and helping their papas among the bees will many times do them more good than studying arithmetic. Our girl Maude has been to school so much, that the doctor said she was in danger of consumption. So you see we took her out of school, and she goes with her uncle ("neighbor H.") down to his apiary by the river. He makes her drive "Patsy," and away they go like the wind. She says she won't drive any more, as it makes her arms ache so. When they get back, "Lu" gives them a lunch of strawberries and sandwiches from the lunch room, and then Maude writes cards and letters to the folks who send for queens and things; but we don't let her write very long at a time. We hope she will get well and strong again, so she can go to school some more; don't you hope so too?

Seeing so many nice letters written by little girls and boys, I thought I would write one too. Papa takes GLEANINGS, and likes it very much. I like to read the letters from the little folks, and Mr. Merrybanks. My papa keeps bees; he lost all but one swarm, but he has sent for more. I had one swarm that I found last year, and that died too. My cousin had a nice swarm come out last Sunday, and they went to the woods. He did not like it very well. I go to school. Our school is out in two weeks, and then we will have a good long vacation. We have a new schoolhouse. It is the nicest one around here. It is called Medina Center schoolhouse. I go to Sunday-school too. I am eight years old. My brother and I have a pet lamb; he likes to nibble the raspberries. I help mamma raise chickens. We have 115 now. **LILLIAN RAY.**

Morenci, Lenawee Co., Mich., June 14, 1881.

Isn't that funny, that your schoolhouse is called "Medina" Center schoolhouse? I haven't got 115 chickens, but I set one old hen on 15 eggs, and she hatched 15 chickens, and has got them all now, with their new feathers on. Isn't that pretty well done, friend Lillian?

I am a little girl 11 years old. My father takes GLEANINGS, I read it, and I like the cartoons. My father put 172 colonies of bees into the cellar. This spring, about 75 colonies were alive. My father never puts his bees in a cellar where vegetables are kept, because vegetables draw moisture. I hived a swarm of bees, and my father gave them to me. I put a hive under the tree, and shook the limb on which they had alighted, and they all fell into the hive. I would like bees better if they did not have stings. My mother makes vinegar out of the water in which she washes the comb. I go to church and Sunday-school. I like to go very much. **EVA AMERY.**

St. Croix Falls, Polk Co., Wis., June 13, 1881.

Well, that is a very instructive and interesting letter, Eva, and I think you did pretty well in hiving a swarm of bees at only 11 years old. Your remarks about liking bees better if they had no stings, seems a little suggestive, especially as they follow so close on your account of hiving the swarm. So your papa lost almost a hundred colonies? You see, we get at some truths from the children which the grown-up folks might not think best to tell us.

MRS. LUCINDA HARRISON'S TALK TO THE JUVENILES.

In reading the Juvenile Department for June we are not only amused, but encouraged and instructed. One little girl, 11 years old, says, "I plant flowers and every thing I can that is good for them." My dear, if bee-keepers, both great and small, the world over, would follow your example, what a beautiful world we would soon have! Then "the wilderness and the solitary place shall be glad for them; and the desert shall rejoice, and blossom as the rose."

My dear young friends, you can increase the honey flow in many ways. A gentleman in Iowa sent me some seed of the Rocky-Mountain bee-plant, saying that "some soldiers brought home the seed from the Rockies, because they thought it was a pretty flower, and now it is growing wild all over the r town." We sowed the seed last spring, and only one plant came up; but after lying in the ground a year they are now coming up in every place where the seed was scattered. In the ground, all around where the plant grew last year, the plants came up thickly, and so we took a dibble and a pan and lifted out the plants carefully, and set them in waste places, so that they can seed themselves another year. Whenever you think of a thing, is the time to do it; if you see honey-plants growing so thickly that they can not thrive, such as catnip, sweet clover, figwort, etc., transplant some of them to different waste places. If the weather is dry, dig a hole, put in the plant, pour in water, and fill up with the loose soil. This is a much better way than planting first and then watering. Try it, and see if it is not. In rainy weather, plants grow if transplanted almost any way; but then, you might get wet and drabbled, and make your mother more work.

LUCINDA HARRISON.

Peoria, Ill., June 6, 1881.

RAMBLE NO. 5.

JOHN ANDREWS.

UPON the western edge of our county is located a small hamlet, designated as Patten's Mills. The mills consist of a gristmill, and a shop for a variety of purposes. In this village lives our friend John Andrews, who, when we visited him, had about 100 swarms of bees. We found Mr. A. in his shop busily engaged making bee-hives. He uses a frame much smaller than the Langstroth, but tiers them up on the Simplicity plan. His bees have a good pasturage; and to aid them, several basswood-trees have been planted along the highway; and it is safe to say, that wherever you see basswood-trees planted along the highway, you will find in that vicinity an enthusiastic bee-keeper. We learn that Mr. Andrews has lost several swarms during the past winter, and he believes his Italian bees are much more difficult to winter than blacks. They dwindle down more in the spring. His bees are wintered in his cellar. We have found other parties who are going to stick by the common black bee. The disasters of the past winter have opened the eyes of many bee-keepers to the fact, that hardiness is a point not to be overlooked in breeding bees, and the breeder who will give us such a strain of bees shall have our patronage.

While speaking with Mr. A. about bee-stings, he related a very peculiar instance of a sting received by his daughter. She was eating honey that had been taken from the hive several weeks or months before, and felt a stinging sensation in her throat. The parts began to swell; the family became alarmed; a physician was sent for, and, with proper instruments, he removed the sting from her throat. This sting, with its poison-sack, had been thus preserved in the honey for a considerable length of time. We have all found people who can not eat even the smallest amount of honey without giving them very disagreeable feelings, and even convulsions. Are not these feelings explained by the presence of poison in the honey? We have found persons who could not eat the old-fashioned strained honey, but, after many tastings, extracted honey was eaten without injury. There was not so much poison in the honey thrown out as in the squeezed-out honey.

But we will return to Mr. A.'s shop, and I will introduce you to his son Cyrus, who is manufacturing row boats. We found a boat much harder to make than a bee-hive; nearly every piece has to be made after a different pattern, and the fit must be next to perfect. These boats are to be used upon Lake George, of which we wrote in our last Ramble. Mr. A. is interested in several cottages for summer boarders, upon the eastern shore of the lake, where, we have no doubt, a welcome would be extended to a goodly company of bee-keepers. Bee-hunting is indulged in on the mountains bordering upon the lake. Lines of bees have been traced directly over Buck Mountain to the apiary of Mr. Adams, six miles away. These bees had an additional quality—they were not only long-flyers, but high-flyers. We could say much more of Mr. A. and his kind family, but must bid them adieu for the present.

Hartford, N. Y. J. H. MARTIN.

If the sting was in the honey the length of time you mention, friend M., it of course possessed no life, and therefore got caught in the throat like any other splinter. That it could empty its poison under such circumstances seems hardly probable; but if the doctor pulled out a sting, I suppose we shall have to admit it, or conclude that a live bee had, unknown to any of them, crawled into the comb. I confess the latter seems to me far the more probable.

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A PLEASANT LETTER FROM A NEW A B C SCHOLAR.

YOUNG IN ENTHUSIASM, EVEN THOUGH WELL ALONG IN YEARS.

I HAD often thought I should like to have bees, but was afraid they could not be kept here, where there is but little honey-making feed, and the climate is very cold; but last year I concluded to try. So I got a hive of the Langstroth pattern, and in June, 1880, got a swarm of bees and brought them home, 20 miles distance. I let them take care of themselves until late in the fall; I then got your A B C book. I am rather old for an A B C scholar, being in my 69th year, but I tried to find the surest way to winter the bees. After considering the different methods, I concluded the handiest to get at was to take a large packing case and lay in about 3 inches of chaff in the bottom, and place in the hive, arranging an opening from the entrance of hive through the side of case, and then packing all around it with chaff well pressed in, and I then covered the top with an old bed-quilt, and left them out on the stand, having many doubts in regard to them.

Early in the spring they were found with a pretty good supply of food on hand, and all lively and in very good condition. So, early in May I got me a chaff hive, to have it ready for a swarm. On the 13th of May, soon after breakfast, I saw the bees coming out very numerously, but I was not quite certain whether they were about to swarm. I asked my wife to watch them, and went and got a swarming-box and my chaff hive; but before I was quite ready, wife came and told me the bees had settled upon the post I have at the garden gate. I got a white sheet over them and put the box under, thinking they would go into the box, which they showed no disposition to do. So I sawed off the upper end of the post, and put it, bees and all, into the hive, and I soon found it necessary to shake them off into the hive, getting a good many of them buzzing around; but I covered them down, and they all very soon got in at the entrance, but did not seem inclined to go to work, even till the next day. So I took a frame with brood and honey-cells on it, and put it into the hive with them, and soon had the satisfaction of seeing them get to work in good earnest. They are now doing well, having nearly filled 9 frames, leaving but one in the lower compartment for me to put fdn. on; but I intend to place some in the frames in the upper story, ready for them. The old stocks are also doing well.

On the 25th of May I was surprised to see bees again coming out of the old hive as though they were about to swarm. I again called my wife to keep watch until I could get up a temporary hive, but had scarcely begun when she came to my workshop and told me the swarm was out, and had alighted on a small apple-tree about two rods from the stand. I asked her to still keep watch until I had got my hive ready, which I made from an old packing case, and put into it some frames from upper story of chaff hive, then cut off the small branch with the bees; but many of them flew around, but soon gathered in a cluster on another branch of the same tree, which I also cut down and got them into the hive. I think this swarm is about two-thirds as large as the first turned out, which was a very large and strong stock. I took another frame from the old stock, and put it into the temporary hive, and I find they have got to work like good busy bees, and are doing first rate. I am now making an upper box to put on the top of the first old hive so as to give the bees more room until I can get a chaff hive made for them. I intend to make one of the same kind for the last swarm, and I am in hopes they will do well.

I have got me a bee veil, but I find it necessary to also get me a smoker. I believe the Lord has blessed and directed me in my efforts with these busy little folks, for which I offer him my very grateful thanks. I like your A B C book; have found it a great help. I also like GLEANINGS. I find many very useful hints, and some good and interesting articles in it. My wife and children like to read it, and they feel interested by its perusal. We all like Our Homes; we also like your manner of doing business, and appreciate your very kind manner of treating your customers and correspondents. I wish you well. Wife and children join me in kind wishes for little Blue Eyes. GEO. W. BURRIDGE, P. M.

Saint John's, Tooele Co., Utah, June 9, 1881.

Very good, friend B., but I can not say I quite admire your plan of "sawing off" every thing the bees happen to alight on. It is a sure way, I admit, but I think you will have no trouble if you hold your swarming-box right over the cluster, and then drive them into it with smoke, or whip them very gently with a little sprig of a leafy branch. Don't strike so as to hurt them, but keep patting them gently, and you can drive them as you would a flock of sheep. Give them a little time to move, and you will find they will soon be all in the box. In the absence of a swarming-box, I often use a common 5c market basket. When you carry them, keep it still upside down, and they will stay safely until you go a mile or more. Thanks for your kind words.

HOW TO WINTER BEES.

BY ONE WHO DOES WINTER THEM.

LET me tell you right here at the beginning, before I make any remarks on the above subject, that the ideas that I shall herein present to you were not all originally conceived by me. They were mostly the outgrowth of the long experience and close observation of my father. The fact that, for many successive years, he wintered his bees with such good success, and that I can claim by the same means, in that respect, so far to have followed in his footsteps, ought to give some weight to the following remarks on the above subject. In March No. of GLEANINGS I stated many things in reference to the subject of "cellar wintering," but did not then state as fully as should be all that must be done to insure success. If it will not bore you too much, just read once again what I there said, and combine those and my present remarks together, and perchance a little seed wheat may be found among all the chaff.

We will anticipate time a little; till July, the time GLEANINGS reaches you. Your first move to make is to secure at once a lot of combs, well filled with basswood or white-clover honey and perfectly finished. Store them away in a warm dry room till fall. If you do not need them they can be extracted at any time later as easily as now. Endeavor to obtain at least two combs (about ten pounds) for every colony you expect to have in the fall. This you can do very quickly by taking some of the side combs of every hive, already partially filled with honey, and placing them in an upper story of another hive to seal. When this is done there is nothing more to do till the beginning of September. At that time every colony must be carefully examined, all old and feeble queens killed and replaced by young ones, of which every bee-keeper can have a supply on hand at that time. See to it that all are breeding well to the end of September. If the fall honey-crop is good, the extractor may be used to advantage to make room for the queen to lay; but this can be dispensed with by removing the outside combs and placing empty ones in the center. Do not stimulate breeding in October, but endeavor rather to have the queen quit laying eggs by the tenth. If necessary, do not contract the entrance, which should ordinarily be done at this time, but allows the cold to enter the hive. It is far better to have them quit breeding four or five weeks before removing them to the cellar, than that your bees should hatch after they are removed.

In the early part of October, another important factor must be kept in view, and that is, winter provisions. Every colony should then be strong in bees; but if they are not, then double up all weak ones; unless, indeed, you prefer to run more risk in wintering, offset by the chance of wintering over a number of good queens. I always pursue the latter course, and in ordinary winters with good success. In spring you will always have some become queenless, when you can double up to more advantage. If your bees are otherwise in good condition, the only thing that remains to be considered is provisions. Now go to your storeroom and bring forth your combs of honey gathered in July, and give to each colony according to its wants, placing the honey on each side, and as near to the cluster of bees as possible. This is the only division-board I ever use to contract my bees. When this is done, give to each colony a few pounds of best white-sugar syrup. They ought then to have twenty pounds of provisions to every colony, and are ready to store away; 200 colonies can thus be fed up by one man in three days. If, however, you were unable to obtain the combs of honey, or have not thought it of sufficient importance to do so, the feeding must be done earlier, to give them time to seal. Let your bees now stand till permanent cold weather has set in, and, unless already too late in November, wait till they have had a last good flight. I know that I herein differ with many good apiarists, and that Prof. Cook remarks in his manual that they should be removed to the cellar before "permanent cold weather sets in;" yet my experience has always corroborated my statement once before made, that it is safer to remove them to the cellar late than take them out early in spring. If the winter and circumstances are such that bees will stand confinement for five months, say from the 1st of November to the 1st of April, they will stand it *just as well* from the 15th of November to the 15th of April; and in ordinary falls and springs I should certainly prefer the latter. But to return to my instructions. I repeat, leave your bees out as late as possible. They will thus consume all unsealed honey they have, and you may be assured that *all brood will have hatched* - another most important thing; and, what is more, having been well chilled they will not again begin to breed till removed from the cellar in spring, if the temperature is kept even at about 42°.

Often it has happened to me that snow and ice have clogged up the entrance when I put them in, so that I had to leave the entrance blocks on till thawed off. Last winter was no exception.

And now as to the kind of cellar, ventilation of the hives, and how to set them. I must refer you to March No., lest this article be too long. The temperature ought never vary more than six degrees, and whether this be obtained by extra good protection of the cellar, by water, or by artificial heat, is, I believe, immaterial. If the temperature is even, your bees will be quiet, consume little honey, will not breed. Let them remain there all winter undisturbed, only once or twice cleaning the entrance by means of a feather. If the winter is mild, a flight during the warm weather might not hurt them; but my bees never enjoy this privilege, and I do not advocate the theory, except where bees are sick with the dysentery. My objection is, it is too liable to stimulate them to breeding. When permanent warm weather has set in, and here again *not before*, unless dysentery makes it absolutely necessary, carry your bees to their summer stands for good, and in day time, notwithstanding Mr. Little or others. Wait till 10 or 11 o'clock in the forenoon; then, if there is no wind, and the weather is warm and promising, go to your cellar and make a dense cloud of tobacco smoke, blowing some into each hive (no matter if you do hit a dead one), and then begin to carry them out, always closing the door after you. At first, all will get restless, and a few will fly out; but an occasional dose of tobacco smoke will soon cool them all down, and you can carry them out in perfect quiet. Removing bees from the cellar in day time has many advantages; the most important is, that you know to a certainty the state of the weather, which you can never know the evening before. As to the bees missing their hives, etc., incident to the confusion they are in, that Mr. Little remarks upon, I must say that I have had far less trouble from it than formerly from wind and weather.

Let some one who has faith in the above-described manner of wintering bees try it and report. I can not claim that bees thus cared for will *always* winter well; but so far they have every time I have tried it, or seen it tried, and that is ten or twelve years. There is no mystery about wintering bees if the essentials are kept in view. It is so well established that all believe it, that "strong colonies of young bees, a good queen, plenty of pure, healthy honey, or its equivalent, even temperature ranging from 40° to 45°, and proper ventilation," constitute these essentials; and what I have said is simply applying them, one and all, to the 8-frame Langstroth hive, with tight bottom and old-style honey-board. That I add to these, put them in cellar late; do not let them breed; remove them in day time, etc., *may* be only pet hobbies of mine, and safer for me to ride than for you. GEO. GRIMM.

Jefferson, Wis., June 17, 1881.

There, boys, you have it right before you —plain directions from one who winters, winter after winter, so nearly without loss, and in such numbers, that it can not well be accident. If you follow carefully and thoroughly the directions friend G. has given, there is no reason in the world why you should not succeed in the same way. Remember, the writer is himself but little more than a boy, like many of the rest of you; but he has learned from his father to do well what he undertakes to do. I presume friend G. would not undertake to say he could winter bees where the young ones and the queens are all the time sold off from the stocks, as is the case in our apiary.

FRIEND SMITH, OF PELEE ISLAND, TELLS HIS STORY ABOUT WINTERING.

WHY DID THE BEES DIE?

I THOUGHT last month that I would tell my story about wintering; but as you kindly admonished us in the May No. to drop the subject, I was discouraged from so doing. I know that it is not desirable to keep filling the pages of GLEANINGS with this subject, especially where it is mere statements of every bee-keeper of the number he had in the fall, and the number he had left in the spring, which statements can be of interest to the majority of readers only as showing the great loss of bees last winter, of which we are all pretty well aware by this time. But when all the facts connected with the losses and survivals are carefully noted and compared, with a view of arriving at some conclusion as to the cause and remedy of losses, they become of more general interest; and we have several such articles in the June No., and reading these has again put me in the notion of telling my story.

My experience was with a variety of hives under different circumstances, and it seems to point to a different conclusion from most of the reports. I had 40 hives, prepared and unprepared in various ways, all on summer stands, in a very exposed situation, and lost 11 — most of them by starvation ; but a majority of those that were alive lost from ⅓ to ⅔ of the bees — some reduced to less than a quart ; but I saved them all, as I know nothing about spring dwindling.

In making my spring examination I proposed to note carefully the condition of each hive, to see if I could determine under what circumstances they had wintered best. I will confess right here, that when I got through and compared notes I was as much in the dark as ever, and more bewildered in trying to arrive at the conclusion as to which is the best plan for wintering on summer stands.

A few hives were packed in chaff ; all others had frames covered, either with cushions of chaff, or carpeting, without any other protection. The chaff hives all wintered fairly, but I was surprised to find the best-preserved colony in the yard in an old half-rotten L. hive, with only a light cushion of leaves on the frames, and some loose boards piled on the top to keep out the wet, which they did not do very well. The second best was very much like the first. Two "long-idea" hives, with bees placed in the center, and only a piece of carpet hung over the frames, coming down on each side near the bottom, were among the best, as were also 2 two-story hives with 6 frames in each story, brought to the center, and carpet hung over them, and cushions on the sides.

To continue my investigations, I determined to see every hive in the Island. I found only three men who had live bees. One had 14 in the fall, in thick box hives, tops nailed on tight, without any provisions for surplus boxes or upward ventilation — *only two alive.* Next had three; one in a beautiful hollow section of a tree — dead; one in a tall box hive, bees working out of small hole in top — very few bees, 35 or 40 lbs. of honey; one in an old candle-box, sides and top only ⅜ in. thick, in very fair condition. These two hives I transferred, and know their condition exactly.

The third man had 9 last fall; 7 of these were alive, and 5 of them were the fullest of bees, brood, and honey, of any colonies I ever saw at that season of the year. They were all in hives with 12 frames, the same as my own, but no attention was paid to them after the bees were put in — no protection whatever; *no cover of any kind on the frames*; but the shallow covers of the hives, made like the roof of a house, from one to three inches deep, were put over them, and the bees allowed to fill the space above the frames with comb and honey. Covers fit loosely over the hive, and the bees were working out from the tops of several of them. And these are the best out-door wintered bees that I have heard of this spring.

A near neighbor found a bee-tree some three years ago; cut off a section of 10 feet, and set it up in his yard. For three years they wintered well, and swarmed two or three times every season. This I thought a perfect model of a *natural* bee-hive; but they died. This led me to make inquiries of the wood-choppers and others as to the bees found last winter in the "bush." Heard of 5 bee-trees being cut, not one of which had live bees in them—no live ones found at all, and I think it probable that there are no bees left in the woods. This would argue that the *natural home* of the bee is not always the best.

Now, what lessons are we to learn from all this to guide us in the future? I confess myself puzzled to give an answer. But it does seem to indicate, first, that a great amount of protection, with thick walls, chaff, etc., is not absolutely necessary to successful wintering, even in such a winter as last, as in the case of the 7 brood hives without protection, and the thin ⅜ candle-box. Second, that some provision for upward ventilation seems essential. Third, that it does not depend entirely upon the kind of food they have to winter on, as all the bees here must have had the same kind of stores. We all know that good food is essential, and friend Heddon has a very fine-spun theory of "bacteria in the honey," arrived at by *reasoning* from effect to cause (I believe that no scientist has ever discovered such a thing in honey with the microscope yet), but here is *one fact* which is worth half a dozen *theorics;* viz., the best-wintered and the worst-wintered bees were in yards not ¼ of a mile apart, and must have had the same kind of honey, as none had been taken from either ; consequently, the food was not the cause of the differences in losses.

I have already made this communication too long; yet left out many particulars that I should like to have mentioned; but I wish to give an incident to show the astonishing amount of exposure bees will sometimes stand, and yet live. In March I found one hive had been overlooked last fall, and there was nothing whatever over them or in the upper story, which was a large one, 11x14x18 in.—not even frames, and yet there was a pint or so of live bees in it — as many as in some other hives, and I would have saved it as I saved all the others had it not been for an accident. THADDEUS SMITH.

Pelee Island, Ont., June 12, 1881.

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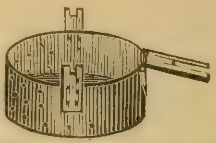
FRIEND GAUFF'S SWARMING-BOX,

AND HOW HE USES IT.

As I am one who reads GLEANINGS, I thought I would write you a letter and give you a diagram of a swarming-box that I have used for two years.



THE "CHEESE-BOX" SWARMING-BOX.

I got a cheese-box that was just large enough for a frame to hang on the inside; then I nailed on two pieces with a notch cut in the upper end to hold the frame in; then I put a handle on one side, with a strap hinge, with a hole bored in the end, so that I could use a long pole or a short one as I wanted; then I bored holes around the bottom, except on the side where the handle is that I lift with, so the bees would not get on that side so bad; now, when a swarm commenced to alight, I would take my box, and put in a frame of comb and shake off the bees in the box, and then, if they were rather slow, I would take a short pole, stick it in the ground, and hang my box on it, and let the bees get settled, and then I would take the frame out of the box and hang it in the hive, and shake the rest of the bees in front of the hive without any more trouble. D. K. GAUFF.

Milan, Erie Co., O., May 15, 1881.

DOOLITTLE ANSWERS QUESTIONS.

[*Continued from June No.*]

KILLING BEES A WRONG.

FRIEND Bradford thinks my comparison between killing bees and a cow too large; that bees are God's "creatures"—not ours, and that God notices every bee we kill by carelessness; also that he don't think of profit when trying to save their lives. In regard to the comparison being too large between the killing of a cow and a bee, I wish to say that we might say a sheep and a hive of bees, if that would please better; but it was not to compare things of equal value I was after, but to show that it was no more sin to kill one than the other; and the claim that, because you eat or sell the carcass of the one *proves more* than the selling the product of the other, is a difference without a distinction. Women are supposed to be kind and tender-hearted beyond men, so hear what Mrs. L. Harrison says in the *Prairie Farmer:*—

> Bee-keepers are apt to denounce those who brimstone their bees, as cruel and unchristian: how about those who let them starve? We were once talking with a kind-hearted Dane, who handled his bees so gently for fear of crushing one, about what he was going to do with a number of his colonies that were destitute of stores. He replied, "I'm going to brimstone them. The farmer selects his animals that he has no further use for, fattens and kills them, and no one calls him cruel. Why has not a bee-keeper the same right? I'm not able to buy sugar for these colonies, and they would perish with starvation before spring. The fumes of brimstone will kill them in a moment; and is not this better than to die a lingering death by starvation?"
>
> Mr. Jones, of Canada, says, "There is one redeeming feature about the system of bee-keeping practiced in Cyprus, Palestine, and Syria; that is, although they are heathens they do not brimstone their bees as do the Christians of Europe and America." Although they do not "brimstone their bees," we see, by his own account, that they let them starve. He says, "It has been the worst honey year ever known in Cyprus. Three-fourths of the bees died last spring, and since then three-fourths of those that were left have died, so there are none in some localities, and only a few in others."
>
> If we supersede a queen, we have first to decapitate the reigning majesty, or destroy her in some way before another will be accepted; and yet we have never heard this practice denounced as unchristian. We have never had an occasion to brimstone bees, for we unite the small colonies early in the fall, if we have any, and feed them, to insure young bees and plenty of stores for winter; yet we think it is a mistaken idea, about its being cruel to do so, any more than to kill a chicken.

Question: If Mrs. H. is correct (which I claim she is), is it more sin to kill a few bees in handling, to save time, than it is to kill a whole swarm to save buying sugar for them? That bees are God's "creatures," and all else living, I am willing to admit; but all were created *for the benefit of man*, and man has the control of all, as the inspired word of God tells us, where the Psalmist says,—

> For thou hast made him (man) a little lower than the angels, and hast crowned him with glory and honor. Thou madest him to have dominion over the works of thy hands; thou hast put all things under his feet.—PSALM 8: 5, 6.

Again, the apostle James says,—

> For every kind of beasts, and of birds, and of serpents, and of things in the sea, is tamed, and hath been tamed of mankind.—JAMES 3: 7.

Thus we see God gave man control and power over all creatures he has made; and I can see no difference between killing a sheep or cow to eat, or sell, thus receiving profit thereby, or a hawk, skunk, or crow, to save our property, and killing now and then a bee that is worth less to us than our time, thus saving time, "for time is money." As to killing God's creatures carelessly, if friend B. will look on the ground he treads upon he will see he scarcely takes a step in the summer season without killing some of the smallest of God's creatures; yet he stops not, but walks on regardless of it; yet he holds himself accountable to God for the bees he kills! If the ground were thickly strewn with bees instead of worms, spiders, bugs, etc., we would, all of us apiarists, step over or around them. Why? because there is a profit in the bees; and this is the reason we treat the bees better than we do the spiders and bugs, whether we are conscious of it or not. Now, just one thing more while we are on this profit question. I see some bee-keepers think it is not right to spend time on the Sabbath to hive bees that swarm on that day. We have been in the habit of staying home from church during the swarming season to hive our bees, believing if God did not design man to care for swarms of bees on the Sabbath, he would not have allowed them to swarm on that day. Well, one day we were taken to task by a good brother in the church, who made dairying a business, for our neglecting the house of worship from four to six Sabbaths each year to hive our bees. Says he, "It is not right; go to church; and if your bees swarm and go off, thank God for what there is left." I said, "Brother C., you keep cows, do you not?"

"Yes."

"And milk them on the Sabbath?"

"Yes."

"Why do you milk them?"

"We—ll; the cows would suffer if not milked for 24 hours, and I milk them to relieve suffering."

"Just so; but don't you take a pail with you when you go to milk on that day?"

"Yes."

"And don't you take the milk to the house, strain it, and, if it is very warm, skim it to keep the cream from taking hurt?"

"I own such is the case."

"And don't these chores, as you call them, keep you from prayer-meeting Sabbath evenings? or if you go, aren't you tired and weary?"

"Such is often the case."

"Well, now, brother, you see, to save the milk from those cows, and care for them the year round, you work ten times the amount on the Sabbath, in the course of a year, that I do with the bees, and all for the profit accruing therefrom."

"I admit you are right, brother D., and hereafter I will not complain of you till I don't take a pail with me when I milk on the Sabbath."

In conclusion, I wish to say I do not believe it right to make a business of working on the Sabbath, nor do I kill any more bees than I can help, consistent with doing what apparently is a necessity; still, I do claim that a man has a perfect right to hive his bees on the Sabbath, as well as to milk his cows, feed his horse, pigs, hens, etc., which no one considers as wrong. I also claim that it is no more a sin to kill a bee than to kill a spider or a snake, and that, when there is more profit in killing them than in sparing their lives, we are justified in killing them.

Borodino, N. Y., May 20, 1881. G. M. DOOLITTLE.

It makes me feel rather sad, to think we must have all this discussion in this matter, and especially so much of it in favor of being less careful than we have been of taking their little lives. Our boys often leave queen-cages standing about, containing bees only, after the queen has been used. It is, of course, more trouble to take these dozen or so bees to a hive than to let them remain imprisoned and starve; but, my friends, the thought of these little fellows dying in this way would so haunt me that I could not be happy anywhere, and, busy as I am, I often take them to a hive and let them out myself, when nobody else will do it. I let them in some gentle hive, where they will not get stung too. I presume it may be a duty to stay at home from church during swarming time, but I would try hard to so arrange matters that it is not often necessary. The incident you mention shows how much weight your conduct has in your community, friend D. A few years ago I was in the habit of going out of church just at the close of the sermon, so I could get my dinner in time to take charge of a mission Sabbath-school. After a few Sundays, I noticed others would go out after I did, and finally quite a string of boys would start just after I did. They doubtless thought I went out because I was tired and sleepy, like themselves, and that if I took such a liberty, of course it would be proper for *them*. I thought about it a little, and stopped; and if the boys are going to follow me that way, I tell you what it is, I believe I would let considerable property go to waste before I would consent to even the appearance of evil. Ernest and John both remained away from Sabbath-school last Sunday, because the bees "might get to robbing," and they also stayed away from the young people's prayer-meeting in the evening, because — well, the principal part of their excuse was, so far as I can remember, that it was more than half over before they got started. Last Saturday night, 20 queens came in by the last express, in rather feeble condition, some of them. I prepared them as best I could that night, and found eight of them dead Monday morning. Perhaps I erred in not putting them in Peet cages, over unsealed honey, very early Sunday morning, for the loss was $8.00; but, my friends, it is a glorious thing, when you do err, to think you have erred "on the Lord's side."

POINTS OF DIFFERENCE BETWEEN BLACK AND ITALIAN BEES.

(Concluded from page 222, April No.)

WHILE black bees assert no special claim to any food offered away from their hives, Italians will often try to prevent other bees from getting any of it, as stoutly as though it were part of their own private stores.

When the humbug by which bees were claimed to be able to convert Cuba honey into some thing equal to the choicest white-clover product was in full vogue, I saw, in a Brooklyn apiary, one hundred or more black stocks all sipping their supplies from the same feeders,[*] and none asserting an exclusive right to the public supply.

18. *Italians will utilize largely any wax which they find away from their hives, while black bees take no notice of it.*

In the first edition of my work (1853), p. 80, I suggested, that "bees might be induced to use old wax for the construction of their combs;" and in the 1857 edition, I say, "I have ascertained that bees will use fine shavings of wax to build new comb; but further investigations are needed to make the discovery of practical advantage." While the blacks are slow to accept wax shavings, the Italians would probably use them largely.[†]

19. *Black bees, when examined by artificial light, are much more inclined than Italians to fly from their combs.*

After many hard experiences, I made it a rule never to open black colonies after dark. Even if not disturbed, the lights from a house, if the hives are near to it, will often attract black bees as well as moths. Now, when queens are hatching, it is often quite important to examine colonies by artificial light; and the ease with which this can be done with Italians is a strong point in their favor, as they seem even less disposed to fly than in the day time.[‡]

20. *Black bees have a very much stronger attachment than Italians to the spot where their hive has once stood.*

Dzierzon, when he had only blacks, found it highly desirable to have two apiaries far enough apart to enable him to secure enough bees for his artificial swarms and nuclei, while many of the methods given in my work, and which cost me so much time in observations and experiments, aimed to secure the same results from a single apiary. Those who have had no experience with the blacks, have little idea what a task it was, in many of the most important operations with them, to get a sufficient number of bees that would stay in any new location. For example, in the fall union of weak colonies occupying different positions in the apiary, many precautions were necessary with the blacks to prevent large numbers of the removed bees from perishing in flying back to their old location, either to perish there, or to be killed by the neighboring stocks into which they sought to gain admission. With Italians, on the contrary, there is no difficulty in quickly uniting stocks, however widely separated in the same apiary. If on a good day for flying, the bees from one stock, after being made to gorge themselves with honey are shaken down before another gorged stock, their loud hum as they enter their new home will quickly attract the attention of any of their companions who may have flown to the old location; and if their hive has been removed, they will soon join their companions, and ever after adhere well to their new position.

21. *When the union of blacks from different colonies is attempted, they are far more likely to quarrel than Italians.*

How common an experience it is, in spite of all our precautions, to have every black bee from one weak stock killed by another black colony, no matter how sorely they may need an addition to their scanty numbers! while with Italians, such desirable unions are formed with comparatively little risk or trouble.

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[*] The seller of this patent, in his recipe for preparing the food, directs that the Cuba honey be mixed with an equal quantity of water; and as no allowance was made for the water (the bees no doubt being as well able to change this water into honey as they were to convert the dark honey into the purest nectar), he was able to reduce the apparent cost of his feed one-half! And yet, persons were induced to invest heavily in this patent, who would have laughed to scorn the idea that they could double the yield of their maple sugar by adding an equal weight of water to the sap before boiling it.

[†] By the insertion of comb foundations we can make a still better use of our wax. I was at work on the artificial-comb idea in 1853 (see first edition of my work, p. 80), but learning from Mr. Sam'l Wagner that he had been experimenting in that line before me, I relegated the whole matter to him. If, like Mr. Root, he could have availed himself of the services of such a genius as Mr. Washburn, he might have made his foundations a practical success before any one in Europe had even begun to experiment in that line. In his last conversation with me on this subject, he said that the wording of his claims was so defective that he must have his patent reissued.

[‡] Denhoff, the great German observer, ranks the bee and the dog as occupying the highest scale in intelligence. A black-and-tan terrier, so much afraid of bees that nothing could induce her to go near their hives in the day time, would follow me, without any invitation, from hive to hive in my night examinations, as though she had a deep interest in my doings.

22. *While all the defects of the Italians can be remedied by care and skill, hardly a single leading one of the blacks seems to admit of any cure.*

They can not be kept from racing and tumbling off their combs, nor cured of their propensity to rob under almost any circumstances, nor made brave or self-reliant under adverse conditions, in any degree to compare with Italians, or willing, like them, to be persistently industrious when honey is to be got only by the hardest kind of work.

While I do not claim to have given all the points of difference between these two species of bees, I have been the more particular, because of the painful conviction that so few are now living of the old generation of bee-keepers who have had a sufficiently long and large experience to be able to give the facts on this subject. Having now no interest of any kind whatever in the sale of Italians, or any other species of bees, perhaps my judgment in this matter may, with some, find a more ready acceptance. Of one thing I am sure,—that the Italians are in greatest favor with those who are best acquainted with the striking points of difference between them and the blacks, and that the use of movable frames, with all the manipulations which follow in their wake, have set a seal of condemnation upon black bees which can never be removed.

While accepting the judgment of the careful observers who claim that the Cyprian and Palestine bees are superior even to the Italians, I am still hopeful that the coming red-clover bee, which is to make our land to flow with honey, even more than the Holy Land once did, will be born of a union between *Apis dorsata* and some of the best kinds now in our possession. L. L. LANGSTROTH.

Oxford, O., April, 1881.

Very many thanks, friend L. I can hardly tell you how vividly the points you mention bring back to memory my own experiences in all these different points; and if any one would prove the truthfulness of every assertion made, he has only now to get some black bees, and attempt to work with them as we do now with Italians. In our older books, we see many points laid down, and wonder at them, while the explanation is, that the books were written for quite another race of bees than the Italians and hybrids that we find now almost everywhere, even in the trees of our forests. I may, at some future time, embody these two papers in our A B C book.

SAVED BY SUGAR CANDY, IN PLACE OF HONEY.

YOU find inclosed an order for one of your hives complete and all ready for the bees.

I am a beginner in the bee line. I bought a three-frame nucleus last summer, but knew nothing about bees except what I learn from your A B C of Bee Culture and Prof. A. J. Cook's *Manual*, but expect to learn more by experience. Last fall I fed them with syrup, so that they went into winter-quarters with plenty of food in five frames, just before cold weather. I put a division-board on each side of the cluster, and then made a box of rough boards just like the one on page 161 of your A B C book, leaving a space of four inches all around the hive, which I filled in with short straw, leaving an entrance for the bees through it at the mouth of the hive. In Feb. we had two or three pleasant days, on one of which the bees came out. I saw they had the dysentery, and so I opened the hive and took but one of the outside frames; moved two of the others, and in the middle put a frame containing sugar. I left them until the middle of April, when I uncovered them, raised the hive, swept the dead bees from the bottom-board, and found sugar there, and, upon examining the frames, I found the sugar all gone, and the frame one-third full of comb. I have now got a pretty strong colony. The person I bought mine of had nearly 60 colonies last fall, but lost all except one. He told me of one man who lives a few miles from here who went into winter-quarters with nearly 300 colonies and lost all except 12. I know two other persons who kept a few colonies, but have lost all this last winter. W. PLATTS.

Davenport, Scott Co., Iowa, May 17, 1881.

I should say, friend P., that you saved your colony, without question, by the sugar. I presume you mean sugar candy poured into a frame, although you do not say so. Whenever you can get a colony to take the feed offered until you get them into the condition of comb-building, you are all right. There is no further trouble, when they will build new combs.

CANDY FOR QUEEN-CAGES,

BY THE BARREL.

I SEND you to-day the "latest improvement" in "Peet" cages. First, I think they need more air than you give them. The double wire makes smothering impossible. Second, the candy I would have "patented," but it would be too easily "infringed." It is the best thing ever discovered for feeding bees under any and all circumstances, as it contains the exact elements in the exact proportions that the bees require, and will not dry out though exposed to the air *a year*. I have it manufactured by the barrel, and can furnish it at 10c per lb. I provision cages as follows: Remove the cover from the box, and prick a small hole in bottom, and punch a ¼-in. hole in the side. Get a barrel of solid candied honey in which a hole has been dug in the center to allow it to drain. Invert the tin box over a smooth place, and press down until the honey touches the bottom of box; run the point of honey-knife under box, and lift out. Shave the honey off level, and put lid tight. If the work is properly done, without *breaking the honey*, it will never run. I have used the cage some without loss. I can furnish cages provisioned at 12½c (with 2 boxes.)

REPORT.

I wintered 19 colonies in house apiary without loss, all strong; 20 in chaff-packed hives; lost 6, and united 3, selling queens; 6 in cellar, lost 4. Total, 45; lost 13. All of my *best queens saved;* 95 per cent of bees are dead in this section. The house apiary is on a *new system*, which I am going to adopt "unanimously." It has been in use 2 years; is a success *summer* and *winter*. I will describe it if I get time. OLIVER FOSTER.

Mt. Vernon, Iowa, May 25, 1881.

Well, now, friend F., that is just like you. Every bee was spry and active, and I let them stand on my table a couple of days before I let them out into the pail bee-hive. The bees had eaten but a small part of the honey in the box, and on opening it I found the candy moist yet, standing up firmly around the hole eaten out in the center just large enough for a bee to go in and turn round. I have often thought of candied honey, but did not think of any plan to keep it so the bees would not get into it and get daubed. Your tin box seems to be just the thing; but where do you get such boxes, and what do they cost? A barrel of candied honey, truly! Why, I am almost ashamed of myself to think I never thought of it before. I am going to try some of it at once in our new 5c cages. I have just been worrying about the difficulty of furnishing a provisioned cage for only 5c. Thank you.—I hardly think many bees die for want of air when all of the other conditions are all right. I am also glad to hear of a good report from the house apiary. It offers some very decided advantages to the queen-rearer in stormy weather.

A CALIFORNIA LETTER.

CAUTION IN REGARD TO LAMP NURSERIES, AND SOME OTHER MATTERS.

THE way that you have headed the article on sun evaporators, some one may accuse me of claiming to be the inventor, which I am not, as there are two others here that were made before I made mine. Please make a note of the above in GLEANINGS.

I am afraid that the honey season will be a failure in this county, as the bees have made scarcely any honey as yet. The black sage has been in bloom about three weeks, and the white sage is in its prime; wild buckwheat is commencing to bloom. The weather has been cold and cloudy all the spring.

Inclosed you will find the record of the hive on the scales, and you can see just what they have done. Nearly all of the swarms are killing the drones.

LAMP NURSERIES; LOOK OUT FOR THEM.

I have mine sitting at the foot of my bed. About a month ago, as the nights were cold, I set my bread to rise in it (see friend Gallup's article, GL., 1880, p. 164.) In the night I awoke and noticed a strong odor of coal oil in the room. As I thought the lamp was out of oil, and had gone out, I paid no attention to it. Some time after, I awoke again and noticed that I could smell it plainer than before; so I thought I would investigate the matter. I made a light and found that the room was full of smoke. I opened the door to the box that the nurseries were in, and found the lamp burning, not on the wick, but around the tube just above the perforated brass of the burner, and a cloud of smoke rolling out of the top of the chimney. You may make sure that I was not long in putting that lamp out of doors. If it had exploded, you may imagine what would have been the result. It is the last time that it shall be lit in the house. If I ever use it again it will be out of doors, away from every thing, in a large dry-goods box.

SUBSTITUTE FOR SOAP BARK.

You wished some one to tell you some thing more about soap root. Now, I can tell you this much about it: I use it, and nothing else, on the fdn. rollers, and know that it is better than soap, and think it better than soap bark. I will furnish it for 5c per lb., which will just about pay for digging and packing. A pound is enough for two or three quarts.

How would honey look in section boxes made of wood like samples inclosed? It is the only wood here fit to make them of. W. W. BLISS.

Duarte, L. A. Co., Cal., May 22, 1881.

I think, friend B., that your whole trouble was caused by poor oil. The oil we use will not light by throwing a lighted match directly into it. The very stringent laws that have been passed in regard to using the cheap volatile oils, indicate plainly the great danger there is in using them.—The sample of wood, I should call beautiful. The reddish tint would contrast nicely with the honey, and who knows but that you may get up a great trade on section boxes on that very account, if you only have plenty of such wood?

HUCKLEBERRY HONEY,

AND SOME THING ABOUT WORKING AND WAITING.

AS I have not seen any thing in GLEANINGS from this county (Sampson), which, by the way, is noted for its *big blue huckleberries* and for the fine quality of the honey made from the huckleberry bloom, I thought you might like to hear how we are getting along with the bees after the past unusually severe winter.

Well, our bees came through all right. I lost 2 stocks out of 39; one, I am ashamed to tell you, froze, the cap leaking and ice forming in the hive; the other was queenless, and was united with another stock. Some of the others were rather short of stores, but I gave them a comb from stocks that could spare some, so that by the first of May, when our honey flow commenced, my stocks were all in good condition. The season was nearly a month later than usual; but when it did commence, the flow of honey was unusually heavy. From 27 stocks worked for extracted, I have taken 1200 lbs., and have gone over them only once; will commence the second round this week, and think that I will get nearly 1000 lbs. more. This is better than I have ever done, and I feel that I am well paid for the care given them for the last three years of almost no profit; but then, it is the men who are patient, persevering, and faithful, who are determined to succeed, who are willing to work and wait for their reward, that in the end will not be disappointed. This is as true in business as it is in the more important work of the soul's salvation. But, excuse this digression. I will say, that this season's experience so far has proven beyond question the superiority of the Italians over the blacks. I have 10 stocks of Italians, the rest blacks and hybrids, and the pure Italians have given me the best results. The best yields were from 3 stocks with young queens raised last August from one of two queens bought from you the year before. The mother was very light, and her workers the yellowest and gentlest bees that I have ever seen. The daughters, on the contrary, are dark, and their workers very dark, and not over gentle to handle; but such honey-gatherers! I have never seen any thing like them. I sold the mother last fall to a neighbor who lost her in introducing; but I have sold him one of her daughters this spring, which he has introduced successfully. I have some of Brown's and Alley's stock, but they don't "pan out" like this strain. I will requeen all my blacks from them this season. I have ordered a Cyprian queen from Dr. Brown, and expect her next Thursday. If they beat the Italians they will prove to be the bee for the South, as the climate is nearer that of their native land.

I will mail you sample of our huckleberry honey, which please test and give your opinion of in GLEANINGS. I think you will find it A 1. I forgot to say, that the 7 stocks worked for comb honey have given me 318 lbs. surplus so far, and will make up about 200 lbs. more. The hive that I am using is some thing like the Simplicity; holds 12 frames, 12½ wide and 9 deep, tiered up 2 and 3 stories, flat cap, and can use either sections or for extractor; brood frames hold 4 sections, 4½ deep by 5¾ long. I would not exchange it for any other hive made. Hurry up on pressed foundation, as I want a machine.

Don't allow the Home department to go down; it is worth more than all the rest of GLEANINGS; and if you will do me the favor to send me your photograph for my album, I will prize it more than I do my best stock of Italians. W. P. WEMYSS.

Clinton, Sampson Co., N. C., May 30, 1881.

Why, friend W., if I had not said so much about the California honey in times past, I should say this was by far the most exquisite honey that ever tickled the palate of a son of Adam. I can not well give all the friends a taste, but I will explain that it has an aromatic (sort of cinnamon) flavor, and one faintly recognizes the huckleberry perfume, from the odor of the honey. How much have you got of this, as pure as the sample sent me? I have not yet got up my cabinet of samples of the choice honey of the world; but when I do, huckleberry honey will occupy a prominent place, I tell you.—My heart is made glad by your kind concluding words; and, although I have almost always crossed these out, before handing to the compositors, I have a sort of feeling today that not many will scold, if I do let it go just as you have written it. I am very glad indeed to hear of your success this season.

ROBBED BEES GOING HOME WITH THE ROBBERS, ETC.

IN his criticism of your A B C, in April No., Mr. G. M. Doolittle asks: "Did anybody ever know the bees from a robbed colony to go home with the robbers?" I think I have observed a case in question.

In 1879 I had, old swarms and artificial increase, 6 swarms of Italians. Not more than one square from me lived a man having 3 swarms of Italians, which were perfectly marked with the three yellow bands. They differed, however, very decidedly from mine, in that they had shining black tips, without any perceptible hair rings, while the posterior part of the abdomen of my bees shows a plainly defined (nearly white) ring of down at every segment of the body. My neighbor's bees gave, during the summer, one natural swarm, which he hived successfully. In the latter part of the summer I noticed most of my bees for several days in great commotion. They all seemed to fly in the direction of my neighbor's garden; and as it was in a time of dearth I soon surmised that they were robbing his new swarm. After a few days their excursions in that direction ceased, and then it was that, while looking through my bees, I found a good plain sprinkling of my neighbor's "black tips" in nearly every one of my colonies. They seemed to be perfectly at home, and remained there "for the rest of their lives." I later made the acquaintance of my neighbor, and learned from him that he had "lost" his new swarm. How, he did not seem to know; but I knew.

CHAFF HIVES FOR WINTER.

I wintered 6 colonies in open air, in Root chaff hives, with thick chaff cushions on top, and 2 three-frame nuclei packed between chaff division-boards, with chaff cushion on top. The nuclei were in common single-walled Langstroth. I left from 6 to 7 frames in each of the chaff hives, and closed the space with a chaff division-board. All came through safely, though one of the nuclei was very weak. If I take into consideration that I was "caught out in the cold," and left them standing entirely unprepared during our rigid November freeze, with surplus combs yet on, thereby losing *heaps* of bees by freezing in every colony; and that I was compelled to move into a new house, which I had built, on the 27th of December, carrying the bees a distance of 1½ miles on a wagon, and sending them, of course, into a perfect uproar, without a possible chance of a flight for about 2½ months afterward, I can congratulate myself on being extremely fortunate.

I say the chaff hives are a success; or at least *some* kind of chaff hives; but I am not yet full pleased with the shape of your hive.

ABNORMAL BEES.

If the observing bee-keeper could scrutinize every bee in his colonies, he would, no doubt, often come across bees which are abnormally shaped or colored. I am in possession of two drones which I consider quite curiously and "wonderfully made." The one, I caught on a comb about 2 years ago, and it is a well-developed specimen of an Italian drone with a *snow white* head. The other, I found straggling in front of a hive a week ago, and, casually picking it up, I at once noticed the extreme smallness of its head. Looking closer, I saw that it had a veritable *worker-head*, with a short drone tongue. It is rather smaller, and much more hairy than a genuine worker-head; but in its most prominent characteristic, the eyes, it is almost perfect. I have both specimens in alcohol.

Bees are doing well here now on white clover.

T. H. KLOER.

Terre Haute, Vigo Co., Ind , June 1, 1881.

FRIEND BUCHANAN, AND SOME OF THE IDEAS HE HAS GATHERED

FROM VARIED EXPERIENCES, SAD AND OTHERWISE.

DEAR GLEANINGS:—Last summer I had eighty strong stocks of bees. They were in prime condition during the time our crop of honey is secured here, and we think they were handled better than the average; and with all our bees, we failed to secure, on an average, more than one-fourth enough to carry them through. Twenty of the poorest stocks were allowed to perish in the fall, and the remainder were fed up in the early part of September on a mixture of grape and granulated sugar syrup; using one-third grape sugar, and a few were fed with one-half each grape and granulated sugar syrup. And right here I will say, these were the first to sicken and die. I should have lost all; but, finding they were going, I began to feed candy by placing it over the cluster, and covering with quilt; and in a few days they appeared to rest easy, and were restored to health and quiet. I winter in a first-class cellar. I set out in the spring, 51 stands in fair condition, and most of them were in chaff hives with chaff pillows on top, and confined on 5 and 6 frames. Had the weather been as usual after setting out in spring, all would have gone right through; but you all know how it turned out. I found them growing beautifully less day by day, and after each spell of cold weather they were united until I could count but 16 weak things, and still scarcely any brood, and they confined on 3 and 4 frames. To-day they are filled full of brood, honey, and bees, and I have had 5 swarms. If we have a fair season I will build them up to their original number. You maintain that, with proper management, there is no season so poor that bees will not secure enough stores for winter. Now, I fell safe in saying this is all bosh, and thousands will say the same on reading this. Tell your customers that one pound of granulated sugar is worth 3 pounds of that vile stuff called grape sugar.

I know it is unsettling to the minds of beginners, and puzzling to veterans in the pursuit to know what course to pursue after reading so many reports of success and failures coming out of the same (or what seems the same) course pursued in the preparation of bees for winter. I spent some time this spring examining bees within 10 or 15 miles of my locality, and I will report, for the benefit of all, what came under my observation. Generally, all were dead; but here and there I found some living, and I want to give the conditions under which they were left for winter.

I found one man with 4 colonies, all he started with in the fall. First hive examined had all the sections on, as in summer, and in prime condition. Next hive had section frames and boxes removed, and covered with several thicknesses of old cloths, and just bees enough to run a little brood in one frame. Third hive had all sections on as first, and a perfect "boomer." Fourth hive fixed same as second, and in prime order—lots of bees and brood. Now, I don't see any thing proven in this case, as to which is the better way—to leave on or take off the section boxes; if any thing, better left on. Bees were wintered on summer stands. Another party had five hives in fall, and five living in spring; wintered in a bee-house facing the south, and in box hives raised on blocks half an inch all round, and honey-boxes on with entrances opening into the same. Bees, pure blacks; one colony in the best condition; the other 4 rather weak, but building up nicely, and plenty of honey. A small apiary, 13 stocks, in same neighborhood, left in same shape, all died. Examined 6 colonies of black bees, all the man had in the fall, and found them in prime order, and especially one hive having a ¾-inch crack from top to bottom, exposing combs to view, and inch blocks under each corner of hive. That's pretty "high" for last winter. Why, I could not have slept at night at all had I a stock of bees in that shape, even if they were blacks. The entrances to boxes were open, and honey-boxes left on in this case. The owner said to me, "Why, you fellers smother your bees in the winter by keeping them closed up too tight; they sweat and become damp, and in this condition soon perish."

I want to tell a little experience of my own.

One season I had a swarm come off on the 16th of May, several days in advance of other swarms. After hiving the swarm, I thought I would see if there were finished cells in the parent hive. When I took the cap off I was astonished to find the frames only half covered by the quilt, and that is just as they were all winter out on summer stands, as I had not opened that hive that spring; but had I known it was in such a sorry fix as that, you may be sure it would have been put in what appears to me good shape.

I got a queen from your red-clover queen last fall, and as she was put in a chaff hive with a powerful colony I left them out; so one day in March, after a cold spell, I wanted to see if there were any eggs in the combs of that hive. So I opened it, and found the whole business dead! I scratched out the queen and took her into the house, remarking to Mrs. B, "There is my red-clover queen gone up."

"Well," said she, "that's too bad."

"Yes," I said, "she is in the 'Blasted Hopes' department, along with the rest of us." But just at this juncture I thought she moved slightly in my hand, and in a few more minutes she was as brisk as any bee. I gave her to a queenless stock, and day before yesterday she came off with a fine swarm, and left 7 L. frames filled with brood. Pretty well for a *dead* queen!

This is a good spring to select queens to breed from. A stock of bees that stored enough last season for their support in localities where it was particularly poor, and wintered without care or special protection, and did not dwindle, is worth propagating. I have two such colonies. They are dark Italians, and I will rear almost all my queens from these. I bought one powerful stock of blacks that had "*stolen enough honey from the beautiful Italians*" to run them through; and, "don't you fail to forget it," I will rear some queens from her too.

I think I hear some "fellers" who have just taken the Italian fever bad, and a few breeders of Italians, Cyprians, and so on, say, "Is not that awful? I'd like to pinch their heads off."

I want to tell you a joke, if you don't say any thing about it. One season, while living in Jefferson Co., O., I was Italianizing bees for neighbors whenever I had a spare day from my farm work. So one day I drummed out the bees from a box hive, and as the queen had mated with an Italian drone, I took her to a queenless stock to experiment with. The first thing I did was to rear queens from her, and select one of the lightest-colored queens to have fertilized by an Italian drone, and from her rear queens, saving the lightest queen. The fifth generation gave me some of the finest queens and lightest-colored bees I ever saw. One day the party from whom I got the original black queen asked what I would take to let him pick a queen out of my apiary. I had been showing him one of these fine-colored queens above alluded to. I put the price away up, and he was only too glad of the chance; so he selected, as I expected, a queen that had descended from the old black queen taken from his hive two years before. I told him the history, but beauty was what he was after, and he seemed satisfied.

I notice there are a great many lengthy articles concerning natural and artificially reared queens—some claiming that the queens reared as the average breeder rears them are the great cause of spring dwindling, bad wintering, etc. I think there is some nonsense about all this theory. I have some queens that were reared under the swarming impulse, and some 3 and 4 year old queens this spring that were reared in stocks allowed to run the thing to suit themselves after removing their queen, and for the life of me I can't see any difference, as all are now full of bees and brood to overflowing. I had a queen of my own importation that died in April, over four years ago, and as her stock was weak I thought the queens they would rear at that time of year would be poor things. Two queens were reared—one light and the other very dark. They were both prolific, and both lived till this spring, when one died for want of bees to protect her, and the other is still doing as good a job at filling combs with brood as any queen could do, and her bees are the best of workers.

We have had a splendid yield from the locust bloom. White clover is now abundant, and with seasonable showers this will be a "boss" bee year. The two last numbers of GLEANINGS are grand—crammed full of interest. **JOHN A. BUCHANAN.**

Holliday's Cove, W. Va., June 2, 1881.

Now, friend B., I will tell you what I particularly like about your letter, and it is a feature that is too seldom found in communications. You do not start out to make any particular point, or to defend any pet idea of your own. You just give, plainly and honestly, the facts as you have found them, let them hit where they may.—After what you have said in regard to grape sugar, I would advise all to be careful that it in no way enters into the stores for winter. At the same time, we have had a multitude of reports indicating the superiority of pure cane sugar over natural stores of honey, as well as over grape sugar. It may be that, in your locality, bees sometimes will not make a living; but how is it that Doolittle *always* has a surplus?—There is some thing in the fact, that bees often seem to winter better for having a crack, or opening, right through the hive; but then, you found other apiaries, in the same condition, all dead. It begins to look very much as if we wanted chaff hives with a good-sized air-hole, open all winter, right over the brood-nest. I agree with you, that a great deal of the talk about poor queens and impure queens is nonsense, as you term it. This season, every thing in the shape of a queen is being bought up at some price, and utilized; and, so far as I know, the cheap ones are, many of them, doing about as good service as any.

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DEPARTMENT FOR FOLKS WHO DON'T SIGN THEIR NAMES.

I TOLD you in May No. of a man who was holding a queenless colony, but who did not sign his name to his order for a queen. Well, he waited 17 days, and then he wrote the following:—

I sent to you for a black queen a few days ago. Why is it you don't send it to me? If not, send the money back. **A. F. EILENBERGER.**

Laddsburg, Pa., May 14, 1881.

Moral.—When you start out to complain, always reflect whether it is not possible it is just your own self who is at fault, and nobody else, and sign your name to it. We will forgive you, friend E.

Here comes a friend who without doubt has the best intentions in the world, and also, without question, has money in our possession, to be used at pleasure, by simply dropping us a postal card; but here is every scrap we can find on the sheet of paper.

After my respects to you, you may send me the amount due me in registered letter; take register fee off. I think that I shall not invest in bees this summer—will see if they do any better. My losing over a hundred dollars last winter runs me ashore financially, as my means are very limited.

Shannondale, Pa., June 1, 1881.

After the clerks had exhausted all their resources, and given him up, they brought the letter to me, saying it would have to go into the proper box, to await his writing again. Now, although we often have to do this, I very much dislike to do it; and, as a further effort, I reasoned that, if he lived in a small town, we might try writing to his postmaster. So a letter was despatched as follows:

"Mr. P. M.—We have received a letter from your P. O., written with a blue pencil, from some one who seems to have money deposited with us, which he wants. If you know of any bee-man who has had deal with us, it would be a favor, both to us and himself, if you would give us his address."

You see, the man may be a regular customer, and we may have quite an account with him on our ledger, if we only knew his name; but as our customers run up into the thousands, it is out of the question remembering, and also out of the question to hunt, without even the initials. Again, we can not expect postmasters to answer even such questions, unless we pay all postage, so we must take a stamped envelope, to inclose a postal directed to ourselves, and this is money out, besides the time of an expert clerk to handle troubles of this kind. Why do we go to trouble and expense for people who are so careless? Because I always feel sorry for careless people, and, to tell the truth, I am naturally very careless too.

"Forgive us our debts as we have forgiven our debtors."

Friend "What's-your-name," do you not think it pays, in the general business of the world, to have your name printed on your stationery?

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CALIFORNIA ITEMS.

ALSO SOME KIND WORDS FROM AN OLD FRIEND.

QUITE likely you have forgotten me, but I shall not soon forget my pleasant three days' visit with you and your kind social helpers about the last of January, 1880. I came here the next April; have worked a little among bees, and been a good deal with bee-men in this and San Bernardino counties. The year 1880 was called a "poor year;" but some took 200 lbs. to the hive, and doubled their stock; but that is above the average. I worked for a man who took 24,000 lbs. of honey from about 300 stands. His "top-boxes" had been on all winter, and he never looked into the lower story, or real brood-chamber. It is quite the fashion to leave on the upper stories through winter, as it saves work, and the bees keep the moth from the combs. A few take them off a while during spring breeding, but many do not.

MR. HARBISON ON FOUL BROOD.

Last Oct. I heard Mr. Harbison give his method of dealing with foul brood, and will give it as nearly as possible from memory. Move the hive, and put an empty box in its place; shake the bees into it, and shut them in for 24 or 30 hours, until sure they have eaten *all* they took with them. Then give them a clean hive. This generally cures; but sometimes it must be repeated. Cut all infested combs from frames, and put in sun extractor, and (I think) boil the honey. Give the hive and frames a good "cooking" in boiling water, and they are again ready for use. I have talked with several bee-keepers who claim to have worked by this plan with success.

In a late private card, Mr. Harbison expresses preference for Holy-Land queens as compared with Cyprians; also that the present prospect for honey in San Diego Co. is not nearly as good as last year; and this opinion, only more so, is shared by most bee-men hereabouts. Bees wintered nicely; no loss except by robbing, and all now generally very strong. In the flush year of 1878, general extracting did not commence until the last of June or first of July; but I am told the signs are different now from then.

The full-sized L. frame is very little used here. A small frame, 9x11½. is much used; i. e., runs crosswise of the 8-framed L. hive. A frame about 11x13½ seems gaining in favor here. In San Bernardino Co. the popular frame is about 10x15 inches. All these are outside measures. The can for extractors is generally of galvanized iron, large enough to take 4 to 6 frames; across the top is bolted a strip of plank; in center, a hole to receive upright shaft with 2-inch beveled cog on top; a wheel about 5 to 6 inches matches this, and the shaft extends to *outside* of can, and generally a common grindstone-crank attached. "Eastern extractors" find no friends here. I saw an extractor for 6 L. frames with hinged wire baskets or buckets to receive the frames, so the comb was emptied without taking it out. I don't know how it worked.

San Bernardino Co. is further inland, and liable to be hotter than here. For an apiary they like a southern slope, with honey-house at lower edge; two rows of hives back to back, 4 to 5 feet apart, and hives about 12 to 15 inches apart in rows; over this a shade of some kind, often brush. These rows run north from honey-house, and give a down grade to wheel honey, and under shade all the time. In both rows, bees get sun morning and evening. All are shaded in the middle of day.

Some bee-men are extracting a little; but the prospect for a good honey crop does not improve much.

Now, Mr. Root, if you can't keep awake in church 'tis pretty good evidence that you need sleep and rest. Please remember, that "Nature's demands are God's commands," and can not be disobeyed with impunity. Don't think you must print any part of this. If it pays you for your time for reading, I am satisfied. I feel you are doing much to bring about "good will to men on earth," and may the angels "bear you up." But you must bear in mind, there are physical laws of life and health, which, to obey, is life; to *disobey*, is death. "Choose ye this day which ye will serve" or do. "Slow up"—you can't stand this speed very long, and we need you for years. J. H. BEMIS.

Los Angeles, Cal., May 23, 1881.

Many thanks, friend B., especially for your little sketch in regard to friend Harbison. We hear so little from him that every scrap is of interest. I am really ashamed to say that I do not remember your visit, but as I read your kind letter, I am troubled to think that may be you were not treated with such kind cordiality as the writer of such a letter deserves. Do you really mean to say, friend B., that everybody who goes to sleep in church is overworked? What an awful lot of poor fellows there is of us, if that is so! By the way, I have lately taken to having a half-hour's nap between the morning Bible-class and the sermon, and my wife says that, every time I have that nap I always say "amen" to the sermon, no matter who it is that preaches.

"But they were splendid sermons, and somebody ought to say amen."

"My dear husband, they were splendid sermons when you went to sleep too; it's *you*, not the minister."

Well, after I had just begun to be happy to think I had discovered a remedy for sleeping in meeting, I discovered that it made me so late I was always with a crowd of tardy worshipers. I some way thought they looked as though they felt glad to see me among them, for if the superintendent were always in just before the sermon commenced, it was not so much matter if they were late too. You see, it is just like going out before the last hymn. The week days are not long enough, and the Sundays are not half long enough. I know you are right, friend B., and I thank you for the application you have made of my favorite text; but what is a body to do, when there is so very much to be done, and so many whom one can help so much, with only just a few words? A few days ago a woman asked if we could give her a hybrid queen, and bees enough with her to build up a swarm, for a dollar. Now, you know it could be done by putting them on a frame of hatching brood; but as it would require half a page, nearly, to explain the matter fully to her, and as we have hundreds of similar inquiries, all I could do was to send her a price list, which answers it all, if she only would read it. It seems she did not read it, for this morning an indignant and threatening letter was handed me, because the queen and ¼ lb. of bees the clerks sent her for the dollar, had not built up into a swarm, but had gone down to a dozen, and the queen was lost. I felt so badly at her disappointment, that I was moved to give her her dollar back; but as the clerks sent her exactly what she ordered, and as the dollars are getting scarce, I felt I had no right to do it. I mention this to show those who complain that I do not take time to answer simple questions, why it is; let a clerk do it? It takes an expensive clerk to fully answer questions like the above, and I can not afford it. I can do it fully with the big printing-press, but that is the only way; and in justice to myself, I must ask you to please be lenient. A great many of the questions you ask are yet undetermined, and we are all experimenting, much as you are. My life is at your service, my friends, but it is my duty to make it go just as far as possible. If I do not answer fully to you all individually, please remember I am trying to answer questions of more import, to a greater number.

AN A B C SCHOLAR'S ARTIFICIAL SWARMING.

I BOUGHT 8 swarms of bees last fall, with plenty of bees and stores; moved them in the month of January. They were in L. hives without chaff cushions. When I got them home I put on top of frames chaff cushions. In February, 2 colonies died with about 30 lbs. of honey. The rest wintered all right. One suffered some from spring dwindling; the remainder were all strong the 15th of May. Then I thought, as I had to be away from home the most of the time, I would artificially swarm the strongest of them, and have swarmed 4 of them.

I shall have to be called one of the A B C class, as I have not kept bees before in movable-frame hives, and know but very little about bee culture. I have your A B C book, and value it very highly; also Langstroth. I am running them for bees instead of honey; and as I had 6 colonies, I numbered them from 1 to 6, and of course the new colony was No. 7. I took No. 7 hive, filled it with old comb and some sealed honey, except one frame; then took a frame of brood from No. 1, placing No. 7 in No. 1's place, then placing No. 1 in No. 7's place on the further side of apiary. This was done in the middle of the day, and the bees that went forth in the morning in search of stores from No. 1, of course came back to occupy hive No. 7, to their disgust, as the comb was not very clean and neat. But they soon settled down to "solid business," and went to work; built up queen-cells, and now are doing well, except one from which I took the old queen with the frame of brood, and they are doing as well as the others, and the old colony is rearing the new queen. The 3 last I divided the 25th of May; one I gave a queen-cell from No. 7. I think this plan a grand success for a new beginner to practice, although it may not be the best plan to adopt for others. I have had no experience with any other plan, and do not wish to advise others, as I am better adapted to learn than to teach. I commenced in the latter part of March to feed my bees on bee-candy, made with 1-5 part flour and 4-5 granulated sugar; put on top of frames under the cushion; then the first days that they would fly I commenced to feed them rye flour, and that accounts for their being so strong, and many of my neighbors' so weak. I think the object is, to get the bees as early as possible in spring; for without the bees we can not get the honey. I have built 33 chaff hives, and shall use no other, as I think the principle the best of any, and am in hopes to increase the 6 to 30 this season by the method I have adopted.

Mr. O. L. Grennug had 36; lost all but 12. Perry Bros. had 40; lost all but 6. The above were wintered on summer stands without any protection. C. J. Robson had 4; lost none; his were buried in the ground. C. H. MOORE.

Richford, N. Y., June 5, 1881.

Your plan does very well, friend M., if you keep constantly in mind the idea that, every day you keep a strong colony without eggs or brood to care for, you sustain a great loss. This is why we should have but few bees in a colony until the young queen begins to lay, and then we can strengthen them up as much as we choose. While the bees are waiting for the young queen, they can care for a comb of eggs just as well as not, and this is where neighbor H. succeeds so well in raising queens. He keeps every queen in his apiary doing her utmost in filling combs, and all the bees in every queenless colony supplied all the time with eggs to keep them busy.

REPORT OF THE BEES THAT WORKED ON FLOUR IN THE HIVES IN MARCH.

SEE P. 234, MAY NO.

I KEPT the bees working upon the flour during cold days, by putting a hot soapstone over the feeder, and it would keep it warm almost all day. The bees did not carry down more flour than they consumed rearing brood. The swarm afterward became quite small, but not more so than others as large that we could not induce to work upon flour. We have fed flour in hives other springs, and could induce about one in five to use it, and these invariably came out ahead. Mr. L. C. Root's and Doolittle's localities are so much later than here, that that has to be taken into consideration, with reference to our own. This has been a remarkable season. We could hardly get bees to carry in honey, and they seemed not to have pluck enough to even rob. We have been *lonesome* for stings.

White clover is coming into bloom, and is very plentiful; but yet the weather is very dry, and if we don't have rain soon, the clover will not amount to much. Black locust and dandelions are now in bloom. MRS. L. HARRISON.

Peoria, Ill., May 23, 1881.

My friend, this is just about as I expected, and I came pretty near adding, "And always thought it would be." March feeding, especially late years, even though you thereby start brood-rearing, is pretty sure to leave the colony no better, and often not as well off, as those not so fed. Of course, such would not be the case were the weather favorable for them to fly out, as it is on occasional seasons. I can explain it in no other way, than that the excitement and stimulus of the food induces them to fly at unsuitable seasons, so that more are lost than are raised by the feeding. I judge this from finding that the bees that are left, after the colony has dwindled down, are all young, downy bees. At the same time, and in the same apiary, queenless colonies will preserve all their old bees until June, and after a queen is given them in suitable weather they will bring up in very fair shape. I would by no means discourage these experiments, for I feel sure we shall eventually succeed in rearing as many bees as we wish, any month in the year.

FRIEND JONES has just submitted to me a copy of the letter which he wrote friend Dadant, and to which the latter alludes under the head of "Fair Play," on page 235, May No. I think no one would say, from reading the letter, that any reflections are cast on the honesty and fairness of our well-known friend Dadant, and I can see no reason why the matter should not be dropped right here.

HONEY-DEW IN OREGON.

IN regard to your inquiries about honey-dew in Oregon, I can say that there are many localities here where honey-dew falls in great quantities. The locality you speak of in GLEANINGS is one of the favorite parts for honey-dew. It is principally confined to the foot of the Cascade Mountains, and on the coast. I have seen honey-dew here in Oregon where I could easily dip a teaspoonful up at one dip. These were favorite spots. Some years there is much more than others. Here on the coast we are favored with more or less honey-dew every year through June, July, and August. I am quite sure that, 20 years ago, there was more honey-dew than at the present time. Then the country was comparatively new, and there were but few bees and a great field of flowers; but since that time great wheat fields and sheep pastures have been opened, in my opinion cutting the resources of honey-dew short. However, here on the coast there is a great amount of "sallal,"* of which the common black bee can not reach the nectar; thus such a great amount of honey evaporating accounts for our honey-dew on the coast. I think if the Italians were introduced here, it would cut the honey-dew crop short, as it would take but a trifle longer tongue to reach the nectar, although there is some honey gathered from this shrub by the black bees, and from the dwarf blooms. W. E. MCWILLI.

Collins, Benton Co., Oregon, May 4, 1881.

We can hardly agree with you, friend M., that the honey evaporates from the flowers and condenses in the form of honey-dew; but it may be we are mistaken. If honey ever falls from the atmosphere, or from the clouds, as some of the friends have claimed in our back volumes, it might be, I suppose, that it rises up from the flowers. The matter seems still clouded in mystery. Many thanks for the trouble you have taken to furnish us these valuable facts.

REPORT FROM NORTHERN NEW JERSEY FOR THE PAST WINTER.

ARE LATE-GATHERED STORES LESS WHOLESOME?

TWO-THIRDS of the bees in this locality are dead. The following include the loss to date in my immediate neighborhood: E. Bellis had 70, lost 51; J. Weller 30, lost 20; I. Smith 5, lost 4; P. Cowel 9, lost 9. There are others who have lost heavily; but as I have not heard from them in a fortnight I am unable to give the exact amount, but think that I may safely affirm, that ⅔ of all are dead, and the loss may reach 4-5 of all. The above were all in box hives. There are but very few frame hives in this locality.

I went into winter-quarters with 14 swarms—11 in Simplicity hives, and 3 in Gallup hives; they were left on their summer stands. Each of the Simplicity hives had 8 frames, with division-board packed with buckwheat chaff, with space between cover and mat filled with chaff. Those on Gallup frames were left with the whole of the frames with caps filled with chaff. Of the 11 Simplicities, 6 are dead; of the Gallup, 1 is dead, leaving me 7 out of 14 alive.

CAUSE OF THE MORTALITY.

I do not think that the loss can be attributed to the cold weather alone. It may have helped to augment it, but I believe inferior stores, with an overplus of pollen, to be the main cause. What would seem to indicate that the stores were mainly in fault is this: That of the 7 that died, 6 were young, and one old swarm, and that I believe to have been queenless in the fall. Of those alive, there is 1 young, 6 old ones. My theory is, that the old swarms had a surplus of old honey, or stores, gathered in the fore part of the season, which were better for winter than that gathered later in the season; hence they wintered much better.

All of the swarms that died had from 5 to 20 lbs. of honey, and of the central frames of each, half of the cells contained pollen with sour honey on top, and as thin as water, so that it ran out of the cells and down on the bottom-board.

The latter part of March I thought I would try an experiment with 2 diseased colonies. I went to my old swarms and took one frame of good stores from each of four of them; put them in a clean new hive, and brushed the two weak colonies in on them together; placed a division-board on each side of them; filled in the empty space with chaff; put chaff over the mat, and shut the hive up and left them for five days; at the end of which time I noticed that they did not fly any, but robbers were going in and out; so I thought I would take a peep and see how they were coming on, when lo! all were dead. J. D. BRANDS.

Delaware Station, N. J., April 19, 1881.

While stores gathered early in the season are doubtless the most wholesome, I do not think this is the whole of the matter. Well-ripened, sealed stores are, without doubt, safer; and I believe clover and basswood honey is, as a rule, most wholesome; but if I am correct, the greatest point of all is, to have old thick combs, containing the cocoons of many generations of brood, to keep the bees warm. New colonies seldom have these, and they are almost always the first to suffer.

REPORT FROM MR. AND MRS. AXTELL.

SOME GOOD HINTS FROM OLD AND SUCCESSFUL HANDS.

I THOUGHT I would write you, and let you know our success in wintering. We had 134 colonies (I think that was the number) that we wintered out of doors with chaff packing, but they averaged weak in the fall; 43 are alive; 23 are now good colonies. The rest will save their queens, and perhaps build up good after awhile. I think I will give them the parent stocks in swarming time.

We had 95 in cellar; all were alive when taken out on the 18th, 20th, and 22d of April, except one; 3 were queenless; united with weak ones. Many colonies were suffering with dysentery; combs wet and moldy—so wet that some hives, on tipping up, a dirty, watery honey would run out of entrance; only a few so bad as that, and those that were weak in bees. The strong ones that were good in fall were mostly dry and clean. We took out all the combs but just what the bees could cover densely. The queens began to lay immediately, and fill every comb full of brood; then we extracted the unsealed honey from the combs, and have been adding one or more as they could care for them, every few days.

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*We are in doubt about this word, and print it just as it looks.

The warm weather and above treatment seemed to cure the dysentery immediately.

Bees are doing finely now. They gathered but very little from fruit-bloom. It seemed to last but a few days, and the wind blew hard most of the time; but as we have so many combs with honey in we set some on outside of division-board, and let the bees carry in honey if they wish. I think we never had more brood in hives, according to number of bees, than now.

I believe that, in order to winter well, whether out of doors or in cellar, it is all important to have, first, strong colonies; second, plenty of honey; third, only a few combs; fourth, pack in chaff; more combs can be given in spring. If in cellar, keep cool as 36 or 38 degrees, never higher than 40; without chaff, better to keep warmer, as per Quinby and L. C. Root. Ours were so wet because we left in too many combs; weak colonies, and poor fall honey.

L. C. AXTELL.

Roseville, Ill., May 18, 1881.

Perhaps many of our readers will recollect that our friends above use chaff packing and cellar wintering both, and that they have been very successful. The above report seems still to favor the cellar strongly.

WHY DO BEES STING MEMBERS OF THEIR OWN COLONY SOMETIMES?

THE question is asked (several times of you in GLEANINGS), why so many bees are killed in front of hives, or are carried out dead in large numbers. Your reply is, that a swarm entered said hive, etc. Now, I think that is not always the case; and, in fact, I will say that I *know* it is not always the case. Persons say that they are certain no swarms entered such hives, and yet great quantities of dead bees are carried out, having been stung to death, as they yet, on being dragged out, have strength to move a little.

As we can profit by our experience in bee culture, it is our duty to give the same, if thereby we can benefit each other and advance the common interests of our industry. Now for experience No. 1.

A fine Italian queen, with wings clipped, was put into a hive; about five days after, the adjoining hive carried out dead bees; it being a box hive, I did not not look into it for several days after the work of death ceased; but another hive was killing and carrying out next to the second, which had frames. I at once opened hive, and found a queen balled, and on dispersing bees I found my wing-clipped queen from No. 1. I immediately caged her, and looked in No. 1, and saw low-capped queen-cells. Where was the queen during all this time?

EXPERIENCE NO. 2.

A friend was looking at a young wingless queen in my hand, and in a careless manner on my part she dropped on the alighting-board of an old colony. "There," said I, "they will make short work of her." She, however, ran into the hive out of sight. This occurred about noon. At nearly night I went my round as usual to see that all was right, and found great quantities of dead and dying bees in front of said hive. I opened it and found the queen balled just inside, and bees so intent on killing her that they killed each other. How long this would have continued I can not say, but long enough to depopulate materially. Now, I have not only had No. 1 and No. 2, but as many as six or eight cases since, and found, in several additional cases, where strange queens were balled; so you can easily conjecture that a swarm entering is not the only cause for such disaster.

Without a knowledge of a swarm entering a hive it would be well to examine at once, and learn the cause, which will be found to be, sometimes, a valuable queen saved, as in case of hive No. 3, and arrest the work of death of so many bees.

You can decide the honey-dew question through columns of GLEANINGS by asking all, as honey-dew may appear in their several localities, to report at once during the coming summer where found, and in what quantities; why honey-dew is so thick sometimes that your "breeches" stick to your boots in passing through prairie grass. None of your aphides production; yet we have such on our willows and sycamore sometimes.

A. L. KLAR.

Pana, Ill., Feb. 17, 1881.

I think you are partly right, friend K., for I have had some similar experiences myself. We should always be careful to take a look into the hive whenever we see an unusual number of bees about the entrance stung to death.

ANOTHER HOME-MADE FOOT-POWER BUZZ-SAW.

AS it will probably be of some value to some of the readers of GLEANINGS, I will tell how I made my hand-power circular saw. I first obtained the cog-wheels of an old-fashioned windmill, the larger one being about 14 in. in diameter, and the small one about 4 in. I put the small one on a wooden shaft, and on this shaft I put a large cast wheel about 2 feet in diameter; from this wheel I run a band to the pully on the end of the mandrel.

HOW I MADE THE MANDREL.

I obtained a one-inch bolt, 15 inches long; on one end I put two burrs; between these burrs I put the saw. In order to make the saw run true, I screwed one burr on first, and turned it with a sharp file; then put the other one on just far enough to admit the file between, then held the file between them while running, and in that way I got the saw perfectly true. I made the bearings by pouring melted Babbitt metal into wooden molds, with a stick the size of the mandrel run through it. I made the saw out of an old hand-saw, by cutting it out with a cold chisel, and cutting the teeth with a file. This is all in one frame, about 3 feet square. It works so nicely one of my neighbors has made one like it to run by water, though he didn't use the gearing.

CHAS. KINGSLEY.

Greeneville, Tenn., March 22, 1881.

Many thanks, friend K. You have succeeded in making a saw that will doubtless do all of your own work, and with almost no expense out. I presume few of our friends will be so fortunate as to find gearing without expense; and even if they should, if they have plenty of work that will pay, it may not be so very cheap after all. It is an excellent idea to be able to make your own tools during spare moments; but the natural tact for such work varies so much in different individuals, that, where one succeeds, a great many often fail in trying to follow him.

Heads of Grain,

From Different Fields.

HONEY-DEW IN SOUTH CAROLINA.

I NEVER had bees do so well in my life. There is more honey-dew on my farm than two thousand colonies could gather. It is on all kinds of trees and shrubs. We have not had any rain for about four weeks, and the dew has been plenty for three weeks. The honey-dew is dripping from some of the oaks. I have tested the origin of the dew to my satisfaction. With the aid of the little magnifying-glass I got of you I thoroughly tested it, and I find that the insect gets it from the leaf or shrub, and crawls on top and puts it out. I took home some leaves that had some insects on the under side, and no sign of dew on top, and put them in my house at night, and the leaves were covered on top the next morning. I also saw them crawl and leave a stream on the leaf behind them. So the honey-dew is a settled fact in my mind. I am swarming my bees. I put a frame of larvæ in and made a hive, and in five days they had 4 Langstroth frames full. I count that big for yield. I had 7 colonies, and I have doubled at this time, and they are doing well.

VENTILATION.

Do you give your bees any ventilation other than at the entrance? Say some thing about it in GLEANINGS. J. D. COOPER.

Traveler's Rest, Greenville Co., S. C., May, 1881.

The report you give of the honey-dew is indeed wonderful, friend C.—We can get all the ventilation required, with the Simplicity hive, by moving it forward on the bottom-board. As the sun does not heat through the walls of the chaff hive, it does not need more ventilation than the entrance affords, when open the whole length, assisted by the ventilating holes in each end of the cover.

OPEN-AIR FEEDING, AND HOW MANY POUNDS OF HONEY DOES IT TAKE TO MAKE 1 LB. OF BEES?

I failed to sell my honey, and am feeding in the open air; have fed to-day 12 gallons of syrup, made of ½ grape sugar, and well diluted. I have about 2000 lbs. to feed during the season. Who can tell how many pounds of honey it will take to make 1 lb. of bees? I will give the price of GLEANINGS for a reliable answer. C. D. WRIGHT.

Baxter Springs, Kan., May 20 1881.

A pretty hard question to answer, friend Wright; for, if I am not mistaken, it will take as many or more pounds of pollen than it does of honey. By feeding flour candy to bees confined to their hives, by cool weather it seems to me we might get at it pretty fairly. I will give $10.00 for the result of a satisfactory experiment; I mean one that would be satisfactory to myself, and you know that I am sometimes pretty notional. Perhaps it can be managed with flying bees, but I confess I don't exactly see how.

AN ENTHUSIASTIC A B C SCHOLAR.

I wintered my bees on their summer stands in chaff hives, and I do not think I lost a quart of bees in ten colonies. There has been so much said on wintering, that I will defer giving you my mode until next fall. One of my neighbors wintered his bees on summer stands, and during the hot weather last summer he raised the front of his hives and placed pieces of lath under them to give them ventilation. That was the "packing" they got for the winter. What do you think of that kind of wintering? he had 12 colonies; 6 of them died, and the others are good strong colonies. More than half of the bees died in this vicinity during the last winter. I had the pleasure of seeing the imported queen that you sent to brother Keeran. She is a beauty, and introduced and doing her duty as a good mother should. I dearly love to read those Home Papers. Very often I fail to attend church and Sabbath-school; but I never fail to read those Home Papers, and they are a great source of happiness to me. Continue them as long as you live, for they are doing a world of good. Friend Novice, two weeks from this evening, if God spares me and the queen, I am going to start a little nucleus. The hive is made; the frames and every thing pertaining to a well-regulated house is in the hive. You are respectfully invited to attend. THOMAS BUTLER.

Bloomington, Ill., May 31, 1881.

Many thanks for your kind invitation and kind words, friend B.; but I fear I can't come, much as I would like to. I am not at all sure that the Home Papers will do you more good than going to church or Sabbath-school, even if you do like them better. You see, it is easier, and we are very often a little lazy about taking up important duties. Go to church and Sunday-school first, and then you can read the Home Papers with a clear conscience. *We* are to help the world along, and not always to be helped or pleased ourselves.

DADANT'S PAMPHLET ON EXTRACTED HONEY.

I hardly think your notice of the pamphlet by Chas. Dadant & Son, in the April No. of GLEANINGS, was as extensive as it deserved. I know it is hard for the editor to give extended reviews of all publications pertaining to our favorite pursuit; but some are pre-eminently deserving, and contain a mass of interesting facts that should be more extensively known, and such is the work referred to. It should be circulated throughout the entire country, north and south, east and west; for there is a lamentable degree of ignorance, even on the part of persons otherwise well informed in regard to extracted honey and the adulteration of the same, and we can not do too much to impart the knowledge we possess; and the bee-keeping fraternity should return a vote of thanks to the Messrs. Dadant for the able manner they have conveyed the information they possess to the public; and every bee-keeper should appoint himself a committee of one to circulate the same as much as possible, and so educate the public, and all comb honey and adulterated stuff will soon be things of the past. E. T. FLANAGAN.

Belleville, Ill, May 5, 1881.

You are doubtless right, friend F., and I should, perhaps, have said more in praise of the book, were it not that I felt the amount of matter that it contained was rather small for the price. Of late, we have been in the habit of getting a pretty good-sized book, on almost any subject, for a dime. I know the matter a book contains has much to do with it, and I know, too, that a book on honey will not have the general demand that some other books would.

POUNDS OF BEES FROM TEXAS, ETC.

I ship this day by express 2 lbs. of black bees, and 1 lb. hybrids. I would ship about 20 lbs. more if I knew you wanted them. I am sending them without an order. As I never shipped any bees, I thought I would try 3 lbs. to see if they arrived O. K. As you have not ordered any bees from me, please just take them and allow me whatever you think is right. I ship the hybrids in the sample cage you sent me without water. You will see I put a wet sponge in the other two. Please let me know what condition they arrive in, as I did not know how to make the kind of candy that was in your cage; and as mine was harder and dryer, I thought best to put a little water, enough to last two or three days. You may laugh at the ugly cages I made, but I don't care if you do; you are so far off I won't know it. They are the first I ever made. **E. J. ATCHLEY.**

Lancaster, Dallas Co., Tex., May 18, 1881.

Well, now, friend A., we *did* laugh, but not at the cages; it was because every bee was alive and in excellent health, in both cages containing the sponges. Your idea is a good one, only I am afraid the water would evaporate pretty fast from the sponges. The express was only a little over a dollar; and if I could not get bees any nearer home, I should certainly buy them from Texas. In the one without water, they were all dead; but your venture turned out pretty well for the first attempt.

THE WINTERING LOSSES.

As you, no doubt, with all the rest of those who keep bees, had a surfeit of the losses and crosses of bee-keeping, I will only say, in common with others, I have lost heavily the past winter. But in the retrospect, I can clearly see that a large share of these losses were from the neglect of the small details pertaining to the care of these useful little creatures. And is it not almost always the cause of failure in any undertaking? for this same attention to small things, so often called business, after all seems the "open sesame" to abundant success.

My report for 1880 stands thus: 25 good strong colonies, when white clover opened; but on account of the general poorness of the season, I took only 1600 lbs. surplus, and increased to 39 fair colonies put into winter-quarters. But more of them hereafter. Am I discouraged? No, sir! Going to give it up? *No*, sir! For I believe with—somebody,—

"To earnest, patient endeavor,
Comes an utter failure never."

MRS. ROSE THOMSON.

Cowlesville, Wyoming Co., N. Y., May 31, 1881.

THE 60-LB. CALIFORNIA SHIPPING-CANS.

It seems odd that you should describe the 60-lb. (5 gal.) can of California as "a 50-lb. can." They are extensively used in California for all liquids, especially kerosene oil. That size seems to be adopted because they are most economical to make and pack, or case. For economy's sake, bee-keepers here commenced using them second hand, and now they continue to use them because they are a staple article, always on hand. **R. WILKIN.**

Ventura, Cal., May 19, 1881.

Thanks for correction, friend W. I presume it was my carelessness, in getting it into my head that those large square cans hold 50 lbs. I know your honey runs about 12 lbs. to the gallon, while the most of ours here only about 11. I discovered it by finding our usual half-pint jelly-tumblers hold just an even pound. Of course, they overrun ½ pint somewhat. As you state it, very likely they are the best packages you can use.

SECTIONS ON ALL WINTER.

There has been a good deal said in GLEANINGS about wintering with sections on or off. I leave my brood frames on all winter, and sometimes top story without any frames at all, leaving the entire top empty, with no protection over the frames at all. I went into winter-quarters with 64 colonies; have, up to date, 62; lost only 2, and they were the only two that had any protection whatever. All were on summer stands.

THE LOCUST HONEY-CROP.

We have the largest crop of locust honey that was ever known in this valley. My bees are storing in surplus boxes now, a thing I never heard of before so early in the season; the locust has been in bloom six days, and will probably last ten days more. Last winter was the most severe we have had for 40 years. My bees were without a fly for 42 days. The snow was about 3 feet deep nearly all that time. I piled snow on my bees, and left it there.

J. LUTHER BOWERS.

Berryville, Clarke Co., Va., May 21, 1881.

THE QUEEN THAT ALWAYS HAS A LAYING DAUGHTER WITH HER.

Good news! The colony containing the queen about which I wrote you, hatched out a young queen to-day. The old queen and the young one were on the same frame of brood. I at once removed her to a nucleus. They have about 8 or 10 more queen-cells started. No artificial queens have been reared yet, and drones are not quite a week old. So you see they are ahead of them all. I will report about her again soon. **M. B. MOORE.**

Morgan, Ky., May 13, 1881.

From the numerous reports we have had, aside from the similar cases we have found in our own apiary, I am strongly convinced we may get a strain of queens that will keep one (or even more) laying daughters in the hive with her, all the time. Has anybody ever heard of three laying queens in one hive at the same time? Two are comparatively common.

GETTING RICH RIGHT OFF, WITH BEES.

After looking over GLEANINGS for May I find that a good many have lost bees all over, as well as around here. I began keeping bees in 1878. I thought, like a good many others, that I was going to get rich right off, so I got six swarms, and paid a big price for them. One swarm I gave $16.00 for; two more I gave $25.00 for. That winter I lost all but one swarm. The summer of 1879 I increased to three; wintered them all right. In 1880 I increased to 8 swarms, and bought one. Last winter I lost 2 swarms, and have 7 left; 6 of these are working first rate, and the other is not in very bad shape. I had all of mine packed in straw. I am encouraged wonderfully, although I have been almost discouraged sometimes; but I am going to keep trying. I have learned more out of your A B C book since I got it, about a year ago, than I have out of all the rest of the books I ever read. **J. W. FLEMING.**

Jackson, Mich., May 9, 1881.

MARKING QUEENS TO TELL THEIR AGE.

In May GLEANINGS, page 240, you consider my plan unreliable, as queens get their wings mutilated by age after one year or more. If this is the case, and the mutilation is so similar to that of clipping that we can not discern the difference, how can natural swarming be a success in the hands of the box-hive bee-keepers?

Again, friend R., did you ever see a queen's wing that was reduced one-half or more its length by mutilation, though she should live a decade of years?

I have practiced the described method with hundreds of queens, and I never found one thus treated that I could not tell, at first sight, her correct age from the clipped wings.

Perhaps you do not clip as closely as I do. If you do, I think you would find the markings reliable.

SWEET CORN; "CORN OYSTERS."

As you wish our recipe for corn oysters, I will give it gladly: 1 dozen ears, scraped as described in GLEANINGS, p. 240; 2 eggs; 1 cup rolled cracker (or flour can be substituted;) 1 teaspoonful of soda. Add sweet or sour milk, if necessary, to make it the consistency of thick pancake batter; fry in butter.

We plant sweet corn about May 1, June 1, and July 1, which gives us a — just such a "prolongment" as Doolittle gets from basswood.

Scriba, N. Y. F. H. CYRENIUS.

Well, I have seen queens, friend C., with their wings all gone entirely, and I think a similar case is mentioned elsewhere in this No. The box-hive men don't "tinker" their hives and bees about as we do. Nevertheless, your point is a good one.—Many thanks for the corn recipe. It makes me hungry just to read it, and it is only half-past 10 o'clock. Why, it will do to plant corn for green corn after this journal reaches you, according to your figures, friend C., and, just as sure as you are alive, I am going to have some planted July 1st, too. Thank you.

TWO QUEENS WINTERED IN ONE HIVE.

A brother about half a mile distant had two queens that wintered friendly in one hive, and no mistake about it; for they were put in the cellar the early part of Dec., and the 25th of Feb. was a moderate day (and he lives at a rather sunny spot), and at noon he moved them to their summer stands for a fly. A few hours later, on examination he found one had two queens. He sent to my place for a cage, and to know whether any queen had left my apiary. Without any examination I knew that could not be, for mine were all in the cellar, except a few very strong colonies, and the temperature had not risen above 40°. I slipped a few cages in my pocket, and went down, and, sure enough, there they were. The first one we came to was a large bright young queen, apparently fertile. The bees had then balled her, and, after that, brother said the other one was darker. We soon found her also balled. She had been balled before, for she had not the least sign of a wing; but she was large and active. I suppose she was the old queen I had reared a few years ago. There was brood in all stages, some young bees appearing. Now, they either superseded the old queen late in the fall, and the old mother wouldn't die for them, or (what I think is more probable) one of my nuclei went in there late in the fall. The young queen looked like an albino, and I had several nuclei that swarmed out and went down to this apiary. Let it be as it may, they were living very friendly.

POLLEN; IS IT ESSENTIAL TO BROOD-REARING?

Friends, it looks very much to me as if pollen does much of the mischief among our bees during winter. Is it really necessary for brood-rearing? Who has had larvæ analyzed, and what are the proportions? On the 14th inst. I selected several very nice bright combs with neither pollen nor honey. I placed them in a hive, and put a rather small colony on them, and fed them pure A sugar syrup, and to-day they have nearly as much brood sealed over as they can protect. They have not had any pollen; how is that for brood-rearing? S. VALENTINE.

Double Pipe Creek, Carroll Co., Md., Mar. 23, 1881.

Why, friend V., you come pretty near taking the ground that bees never need any pollen at all, and that when they carry it into their hives, they are making a blunder. The experiments I made in the greenhouse are, I think, conclusive, — that no brood can be reared without access to pollen or some substitute; but I may be mistaken. Your bees flew, doubtless, between March 14 and 23; and, although you did not see them carry any in, nor find it in the combs, I think they got enough for the brood they reared.—I am inclined to think the queens you mention were mother and daughter, or at least were both hatched in the hive. Has any one ever introduced a laying queen into a hive having a queen, so that both would continue laying side by side?

HOW THE GENERAL RUN OF BEE-KEEPERS AVERAGE.

I thought perhaps you would like to know how the bees in this part of the country have wintered the past season. The following is a list of the bee-keepers who live within about a mile of me, and their losses:—

NAME.	NO. IN FALL.	LOST.	NAME.	NO. IN FALL.	LOST.
C. E. Canoles,	33	7	Chas. Fell,	1	1
Wm. Johnson,	14	13	S. Naylor,	4	2
John Knight,	12	11	J. J. Starr,	2	1
Harry Mays,	13	11	S. Tracy,	2	2
J. Vance,	14	7	J. T. Diven,	1	1
Amos Sholtz,	2	2	T. B. Anderson,	2	1
R. Fell,	2	2			

Nearly all the above colonies which died were black bees in box hives. I had only 5 in box hives; 4 of them died. The others were in L. hives. I now have 1 in box, and 25 in L. hives. Those I have left are Italians and hybrids, except one, which is black. It has been the hardest winter on bees that was ever known here. All the above bees were wintered on summer stands. Most of the bees that died left from 5 to 30 lbs. of honey in their hives. I am beginning to receive orders from my three-line adv't in your May No. C. E. CANOLES.

Hereford, Balt. Co., Md., May 21, 1881.

Well, it seems the above does not show greatly in favor of box hives and black bees, does it, friend C.?

RUNAWAY SWARMS; HOW TO REMEDY.

How do you keep bees from swarming while you are away at church and Sunday-school? I had ten strong hives to begin with this spring. Last Friday one of them sent out a large swarm, and I hived them and set them away. Saturday another swarmed. Sunday, all went to Sabbath-school, and when I came home I found another swarmed, and gone to parts unknown; but this is not what troubles or puzzles me so much or what I expect to find a remedy for. But while I was looking for the departed swarm, swarm No. 1 came out of the box that I had put them in, and alighted on their chosen limb again. I got another box and hived them again. They went in nicely, and seemed all right; but not feeling altogether easy about them I went out in about two hours to look after them, and behold, they were gone. Now, it is perhaps too bad to trouble you with all of this; but if anybody knows the cause and remedy for such a freak, I suppose you do; and I would like to. I forgot to say, they had made some nice combs in the first box.

Smithfield, O., May 30, 1881. N. L. Wood.

Where you raise comb honey, it is a pretty difficult matter to fix a large apiary so you know they will not swarm during the swarming season. Very likely it is one's duty to stay at home at such a time. Let one competent person look after the bees one Sunday, and another the next, and so on. Of course, very much may be done to obviate the necessity of such staying home at all; and where artificial swarming is practiced, it is an easy matter to fix each colony so there will be but a small probability of swarms issuing. From your writing, friend W., I infer you have only box-hives; if so, you must expect to lose swarms. Use movable-frame hives, and give each swarm, as it is hived, a comb containing unsealed larvæ, with as little honey as possible, and my experience is, that not one in a hundred will ever desert the comb of larvæ. Empty combs are a great help to a new colony, and have always seemed to me to have quite an influence in holding them to their new home.

COVERING THE BEES WITH HAY, OR SWAMP GRASS.

Last spring, 1880, I went into partnership in the bee business with Dr. Henry Munger, a true, faithful, Christian man. All things went well until the 9th of September, when he was taken quite sick. The doctor lingered, hovering between life and death until November 23, when he died. After he was taken sick I had 100 colonies left on their summer stands. About the 1st of December I covered them with "slew-grass," each hive as it stood. For five months they were shut up, and never flew. I lost 7 stands, and came out this spring with 93 colonies in good condition. Now I have over 100 stands of as fine Italian bees as can be found anywhere in this country. I am well satisfied, considering my inexperience. I am truly sorry you had such heavy loss; but you have the pluck to "pick your flint" and try again. Isaac Edwards.

Omaha, Neb., June 2, 1881.

THE FEEDER WE USE.

Take a square piece of tin, mark a straight line around it about ½ in. from the edge, and also from that line to the corner; then bend it over a sharp tool, and turn up, lapping the corners with the pliers. I can make them without any soldering. Then when I fill up my oyster-can, fruit-can, or any thing that is handy, just set my plate on top, and turn over without spilling. I would not have those Hains feeders with top *fastened* on. Mollie O. Large.

Millersville, Ill.

CANDY FEEDING DURING SPRING.

You sent me a tub of grape sugar in March. It was very bitter stuff and I feared the bees would not eat it, but I made about 30 lbs. of candy according to directions, and put a small brick of it over the cluster on 25 hives, and tucked them up warm. They all seem to have nibbled at it a little, but I don't think they have eaten a quarter of a pound of it altogether, and 12 colonies died—some of them evidently of starvation; two colonies had cakes of maple sugar, though, and I couldn't see that that was any better.

Jackson, Mich., June 5, 1881. Joseph Cook.

When bees get to the point where yours were, it is a hard matter to get them to take any thing in the way of food, as you found by using the maple sugar, which you say seemed to answer no better. Candy made of pure cane sugar would have made little difference, and the best of sealed stores of honey seems to be scarcely noticed when they get this spring malady. However, when the weather is cool and the cluster small, they will often take to honey or stores sealed up in the combs, when they will not notice candy of any kind; for candy, it should always be remembered, is food in an unnatural form, and they often have to learn how to take it, as it were, before they use it freely. I have very rarely found a colony, of any strength at all, that would neglect to use maple sugar, if put right over the cluster, and well covered up. I have hunted up friend Cook's order for sugar, and it reads as follows:—

Inclosed I send you $5.00, for which please send me 100 lbs. grape sugar by freight. Please send the sugar immediately, as my bees are in a starving condition. Joseph Cook.

Jackson, Mich., March 14, 1881.

We have several times had complaints that bees have starved, while waiting for grape sugar or candy, that was ordered by freight. There is some thing radically wrong about all this. If grape sugar is to be used, it should be ordered, and on hand, long before the time it is likely to be wanted. If bees are suddenly found to be in danger of starving, go at once to the groceries and buy sugar or candy. Keep them going on this until your grape sugar comes, which, as freights are uncertain, and usually slow, is at best uncertain. Where it has to be shipped some distance, the sugar from the groceries is often the cheaper, taking freights on small quantities into consideration. Lastly, when bees are starving, you must not only give them the food, but make them, or, rather, see that they do take it. Many a colony has been lost because the owner hurriedly placed food where he supposed they could get it, and then left them, only to find, a few days after, that they never found it at all. I once found a colony almost out of stores in April. I put a quart fruit-jar of honey over one of the holes in the honey-board, and said to myself, "There! I guess you won't starve now;" but a few days after I found them all dead, clustered over to the opposite side of the hive from where the honey was placed. There is no other way, my friends, but to be on hand, and to make success certain by watching and prompting at every step.

BEES THAT WON'T WORK IN THE UPPER STORY OR BOXES.

I have a number of full colonies—large colonies in 2-story hives, but they will not work in the upper stories, either in the L. frame for extracted honey, or in the section boxes which I have in wide frames. What is to be done? The flow of honey at this time is immense, **Jno. W. Hinsdale.**

Raleigh, Wake Co., N. C., May 11, 1881.

This question is pretty sure to come up many times each season. Friend H., you must *make* them go up and go to work. With hives fixed for extracting, it is an easy matter, for they will usually go up on finished combs without trouble; but if they don't, just put a comb of brood up among them. With our arrangement of section boxes in the wide frames, you can raise a comb of brood to start them in the sections also; but a better way is to hang a frame of sections at each outside in the lower story, a little before the upper stories need to go on, and when they get well to working in these, raise the frames of sections above, putting more empty ones below. I suppose of course you have fdn. starters in all your frames and sections. Putting on the upper stories too soon is often one cause of getting the bees averse to going above. You should wait until they begin to be a little crowded, and then they will usually go right up and commence work, just as soon as the room is given them.

VENTILATION IN WINTER.

My report for this winter is 3 out of 9 swarms dead, for want of ventilation; one swarm, with opening in top, 2x14 inches, saved in extra good condition. One box hive with two-inch hole in top, always open, wintered without any dead bees; now ready to swarm; 4 in Simplicity hives, with oil-cloth cover; no ventilation; got dysentery badly in March. I fed each, one quart of coffee A sugar syrup, and gave good ventilation; all were well in two days. Ventilation is the thing. My bees had no protection. **M. L. Hobbs.**

Middleport, Meigs Co., O., May 18, 1881.

There is, without question, a significance in these reports of favorable wintering, with an opening, or openings, of not too large a size, right over the cluster. Suppose we have a hole in our chaff cushions, right down into the cluster of bees? I know this idea is not new; but are we sure it has been sufficiently looked after?

PACKING WITH FOREST LEAVES.

My bees that were packed, 17 stands in all, are in fine condition. My box hives, with no protection, all died. I think fully ¾ of the bees in this locality have died this winter and spring. I am fully convinced of the importance of packing in some form. I packed mine in forest leaves. **C. L. Bostwick.**

Sandy Hook, Fairfield Co., Ct., May 13, 1881.

I believe friend Dadant at one time used forest leaves, and may yet for aught I know. Will he please tell us about it? As these are much more loose and porous than chaff, it may be that they would offer some of the advantages secured by leaving sections on all winter; viz., more thorough and complete ventilation.

ITALIANS WORSE ON SORGHUM-MILLS.

Last fall I had 24, all in trim on the A B C plan, painted like Joseph's coat: 17 colonies were Italians. When I ground the amber cane (the seed of which I got of you), the Italians just swarmed over the mill, and were reduced so much during that winter I lost 10 of them. The blacks did not bother, and so all wintered well. With me, I came off better than most of my brother bee-keepers here.

W. Wininger.

Glasgow, Barren Co., Ky., March 17, 1881.

CHAFF HIVES AGAIN.

Don't go back on chaff hives. My neighbors lost bees in cellars, in bee-houses, and in tenement hives. I have been several miles around, and examined them. Some have 3 out of 50, while others having 100 lost all. Mine on their summer stands in chaff hives are all right. May 12, drones flying; lost 1 out of 25. I don't want any space in Blasted Hopes this spring. **W. D. Higdon.**

Jackson, Mich., May 16, 1881.

Friend H., if you could see the number of chaff hives we are sending out, even in this month of June, you would think that neither ourselves nor customers had any thought of "going back on them" right away.

CHAFF PACKING, ETC.

It is about time I told you how I came out, for it was a hard winter on bees. I am sorry so many have lost almost all their bees. Well, the trouble is in the stores that the bees had to live on through the winter. You see, two years ago I lost 67 out of 70, and it was not as bad a winter as the past. My wife said I had better give up the bee business now. I told her I would get my money out of where I lost it, and so I have. I didn't like to give up, for I had been at it for 15 years. Now I will try to tell you how many I lost last winter, and how I wintered.

COLS. LAST FALL.	HOW PACKED.	DEAD.
21 in chaff hives,		0
6 in house No. 1,	packed in chaff,	0
4 in house No. 2,	packed in chaff,	0
5 in house No. 3,	starved, packed in hay,	2
16 in house No. 4,	packed in hay,	2
2 in house No 5,	packed in chaff,	0
18 no protection,		8

These houses are 3 feet wide, and high enough for hives; frames to hives are all one size, and all have 9 in a hive, except a few weak ones I am building up now. **Stephen Hill.**

Port Huron, Mich., May 8, 1881.

You say the trouble is in the stores, friend H., but yet you don't tell us what stores they had during this last winter, different from when you lost so many.

CHAFF ONCE MORE.

I have been reading so much in Gleanings about wintering bees, that I felt a strong desire to tell you of my success. I have not lost a single swarm since I have packed in this way! I use Sayles No. 1 hive, with Langstroth frame; take out 4 frames, put division-board on each side, and pack tight with oat chaff, then put a piece of carpet over, then a peck of loose chaff, then a chaff cushion on top of that, and leave just as they stand through the summer. I packed 21 last fall that way and never lost one. The hives were all dry and clean, with hardly any dead bees. I do not like oil-cloth over them, for it always creates a moisture on the sides of the hives for me. Most bee-keepers in this section lost a great part of their bees. My bees averaged $12.50 to the hive last year, and were all strong this spring when I cleaned their hives. I go around my hives every day, winter and summer, and see that the entrance is clean and every thing right.

MRS. J. S. COCHRAN.

Macon, Macon Co., Ill., June 1, 1881.

BEES ON THE BRANCHES OF TREES IN TEXAS, ETC.

I sometimes get long letters from novices in horticulture. These letters would be a great bore to me if they did not afford the gratification that I had set some one to studying my favorite themes, and then I often *do learn some thing*, even from them. Of course, I can not reply in detail to such long letters.

I have learned much from your book already—much that I am surprised to think I had not common sense to see. I am ashamed to tell you of some things I have done with my bees, because I did not know any better. The more I have to do with my bees, the more I love them and wonder why they did not sting me to death for some things I have ignorantly done with them.

This is an alluvial region. Among the mountains of Bandera Co. there are many "*bee-caves*." Beyond the Rio Grande, bees often occupy the under side of a large limb in the open tree-top. There they build comb and gather stores, just as if they were in a hive.

The other day I was talking about bees occupying open tree-tops in Mexico. One bystander remarked that he had found such a swarm in the adjoining county (Calhoun), that he took the honey and gave the bees to Mr. Hoff, of this county. I mean to learn from Mr. H. whether they became contented in his hive, and whether they were a different variety of bees from those we are accustomed to. Another acquaintance, so well known to me as a man of perfect veracity that I can not question any thing he would say, says that he took a bucketful of honey from a swarm similarly situated, in my own neighborhood. He has some knowledge of bees, and says they were the common black bee of the region. They had selected a position under the bent portion of the tree. Our preacher (a man of undoubted truth) says, that on the frontier, toward Mexico, where he had once been on a frontier circuit, he had repeatedly seen swarms of bees occupying sheltered positions on trees which had no cavity, and that in one instance he had seen them *in the grass*, where tall coarse grass had lodged together from different directions so as to form a shelter. This fact, for it *is a fact*, makes me smile when I read articles headed, "Why Bees Work in the Dark."

G. ONDERDONK.

Mission Valley, Victoria Co., Tex., June 4, 1881.

Many thanks for the facts furnished, friend O. You judge rightly; these letters are a great source of pleasure and profit to me, your own affording a striking illustration of the point. I do not get time to reply, however, as I would like to, and thank the kind writers. Bees on the branches of trees are sometimes known, even here; but I suppose it is more common in warmer climates.

BLACKS OR ITALIANS; WHICH WINTER BETTER?

You say, on page 293 of GLEANINGS, that the past winter has almost "extinguished black bees in our country." Well, the case seems to be different here. May be the blacks wintered better in some other places. It may be that is why there is such a demand for black queens and bees as you say there is on page 298 of GLEANINGS. I had 65 last fall; have 5 hives now (4 or 5 hybrids; rest, 60, Italian.) I give a few reports below, here in Washington Co., Pa.:—

Mr. Fordice,	80	Italians,	has	left	1	this	spring.
Mrs. Parkinson,	2	"	"	"	0	"	"
Mr. M. G. Minton,	8	"	"	"	3	"	"
S. P. Beatty	11	Black,	"	"	11	"	"
F. Stanker,	6 or 8	"	"	"	5	"	"
A. Elliot,	20 or 25	"		lost	1		

The strongest hive I have are hybrids. I will confess, that I have some notions of getting the old black bees again. Let us get at the facts of the wintering of bees. The people, most of them around here, think the black bees can stand the winter better. I have had Italians 6 or 7 years.

The bees were all wintered outdoors on summer stands without protection.

J. L. HOGE.

Sparta, Washington Co., Pa., June 9, 1881.

That is right, friend H., give us facts, by all means. I did not mean to say the blacks wintered worse than Italians, but rather that those who kept black bees are giving them up, so that the Italians had a clean sweep, as it were. You know, those who keep black bees mostly make bee-keeping a secondary consideration, as it were, and after a few reverses, they, as a general thing, drop bees entirely. The experts, on the contrary, can buy every spring, and build up with Italians, and make a good thing of it even then. I am inclined to think that hybrids, other things being equal, will winter better than either race pure. Let us have some reports on this matter.

CHAFF, SAWDUST, AND A SUGAR, ETC.

There was a great loss in bees in these parts last winter, as nearly all died. I had 4 colonies (Italians) last fall, good and strong, with plenty of honey; two died with dysentery; the other two came through, one very weak, the other tip top; had a fine large swarm on the 16th. They are also making surplus in top boxes. I have a friend who had 16 colonies last fall; he brought them all through without any loss; had them packed in chaff and sawdust. His main dependence is chaff, or sawdust and A sugar. He thinks it is just as safe to winter bees as it is horses or cattle, or any other stock. Now, what think you of that compared with the loss of 128 out of 140 colonies?

W. C. NEIL.

Strattonville, Clarion Co., Pa., June 18, 1881.

HOW I FASTEN FDN., OR STARTERS, IN SECTION BOXES.

Take a tin pan, and put in clean wax; melt it, not too hot, your grooved section pieces on your left, starters on the right, with your melted wax in the middle, or front of you. First move: take grooved section piece in left and starter in right hand; dip starter in wax; stick right in groove; shove it to left, out of your way, and repeat. I tried this two years ago; stuck 500 starters at two sittings by the stove in July; had to nail the sections afterward. Not one of them dropped in nailing. I think I can stick full frames the same way, and beat any machine I ever read of.

J. E. JARRETT.

West Point, Iowa, June 14, 1881.

Very true, friend J.; but you did the work yourself. Suppose you set a child at it, or any cheap help; they would daub wax everywhere, and would not make it go either; whereas, with the Parker machine they would do good work, and do it rapidly. I know your plan is a good one for one who can be trusted to handle melted wax.

ROBBED BEES GOING HOME WITH ROBBERS, ETC.

Just a few words from our section. Bees never have done better than now; 180 natural swarms May 12; more surplus to-day than all last year; very heavy honey-dews.

Now just a word on Doolittle's comments, about robber bees joining intruders. This spring one of my father-in-law's stocks began robbing one of a neighbor's, and robbed till all honey was gone. The robbed swarm gave up, and followed out in a mass—queen and all. They clustered on a barn-side for half an hour. All the while they were there some kept up a strong "line" to the robber's stand, and then all went to the stand and went in. If there was no queen, why did they hang so long? We saw them come out in a body, and so I, for one, am convinced.

QUEENS THAT WON'T LAY.

Did you ever have bees that accepted a queen for one month, kill her? I have been buying some Italian queens, and one that was warranted pure and laying, I think was not fertilized; if so, would she come out twice, as if to meet the drones? I have had one act this way. The last time, she did not come back; I presume the birds caught her. Now what ought I to do? She was received in good condition, with a postal stating she was known to be laying; but not an egg she laid for me. Will friend Flanagan tell what kind of candy he used to make his bees boom so?

BLACK ITALIANS.

I have one swarm of blacks that have *every* peculiarity of Italians. To handle them, you would never know them to be blacks; comb is always built upward, but no yellow bands, and no one could buy that queen from me. Why? She is always the first to swarm, always the first to store supplies, always the strongest, and I have never lost one swarm from her in wintering yet, without protection either. I have taken full frames of brood from her all summer, and nothing checks her. I am now trying to get her daughter crossed by Italian drones, but can't say for certain, but I don't think they have. I call her "Best," and she has well earned her name. If there were black Italians, I should call her one.

Ed. Ladd, Jr.

Beverly, Macon Co., Mo., June 17, 1881.

I have known colonies to seemingly protest against accepting queens for nearly a month, and to finally kill them after they had laid the hive pretty full of eggs. Removing queens sometimes causes them to stop laying entirely Neighbor H. carried one of his best queens down to his river apiary, and introduced her; and, although she was a good laying queen, and was out of the hive only a few hours, she never laid any afterward. Have charity, friends, and be slow in accusing anybody of selling a virgin queen. If the queens we send out don't lay, after a proper time, say three or four days, if honey is not coming in, feed regularly for a day or two; if they don't lay then, say so pleasantly, and we will send another in her place; but please don't write back you think she never *did* lay.—I should not be surprised if such a queen might take another flight; you know I gave pretty good evidence that a queen received from Italy once met a drone here, before she commenced laying. Hold on to your black Italians by all means. They may have Italian blood in them, I suppose, even if they have no bands.

WHAT A POUND OF BEES WILL DO., ETC.

Last fall or the last of summer I bought one tested queen and a pound of bees; paid $3.00. The bees she raised were nice. They wintered well, but one day in March I saw the bees drag her out dead. I thought all was lost; but one day in April I saw a young queen out for a fly, but there were no drones. It was the last time I saw her. The bees soon died. Moral: The queen must have been old.

Wm. G. Norton.

Honeoye Falls, Monroe Co., N. Y., June 1, 1881.

But I must protest against that "moral" a little, friend N. I do not know of whom you bought the pound of bees and queen, but I would put the moral as it is in the A B C; viz., any queen is liable to die or stop laying, at any period of her life; and because you happen to be unfortunate, do not uncharitably decide that the person who sold you the queen knowingly sent you an old one.

ABSCONDING OF A POUND OF BEES AND QUEEN.

The pound of bees with queen came to-day in splendid condition—not two dozen dead were found in the case. But what ailed the pets? I think they took a sudden dislike to this northern country. I arranged a nice hive for them, with a full frame of brood, capped and uncapped, and a frame containing honey. I opened the case containing the bees with queen, and set it in the hive, and covered the same with usual honey-board and top, and after watching their movements 15 or 20 minutes I left them about half an hour, and returned, when I noticed they seemed quiet; and in looking into the hive to see if they had all come out of the case, and intending to put in a division-board, I noticed the bees had taken "French leave"—not a dozen bees to be seen. What could have been the reason? I am sadly disappointed, and imagine I at first must have resembled Rodney, in the cartoon for May, page 220. I *felt* as he *looks*, at all events. W. Wakefield.

St. Paul, Minn., June 10, 1881.

We had just one such report last year, and as we have sent out toward 1000 lbs. this season, with only one such report, I can hardly think it a very common freak. I do not know what more one could do, after giving them a frame containing unsealed larvæ. If the hive had any offensive smell about it, I should perhaps think that the cause. Although we were in no kind of way to blame in the transaction, I hardly felt right to let our friend have all that money and trouble out, without a bee to show as an equivalent, and so I offered to fill the order again at half price.

"NEVER SAY DIE;" RAISING BEES IN THE HOUSE.

Do you remember in Feb. No. you put me in Blasted Hopes. If I had lost all I would not despair nor give up. My hopes are not *blasted* yet. I saved two out of seven, and they are doing well. Winter came on unexpectedly early and severe; frost gathered in the hive; after two or three weeks it thawed just enough to run on the bees, and before they could get dry it turned cold again and froze the little pets to death. I discovered the trouble when all were dead but two, and they had only a handful left. I took them into the house, set them behind the stove, and they warmed up and got dry. In three days the queens were laying. I kept them in a warm room, and in less than ten days they were hatching young bees, "you bet." I took good care of them, and they are now filling their hives full of white-clover honey. A. BIXBY.

Foristell, St. Charles Co., Mo., June 14, 1881.

The following little circumstance is not without interest to the A B C class:

BEE-STING IN THE EYELID.

On the 6th day of the present month my neighbor Fantcher was hiving a swarm of bees, when he received a sting on the right eyelid, about a sixth of an inch above its lower margin. He scratched the sting off, as he thought, and continued his work, thinking no more of the accident until the 8th inst., when he began to perceive a very unpleasant sensation of scratching on the surface of the eye whenever the lid passed over the cornea (or colored part.) This soon became so intolerably painful that he came to me for relief. By the aid of a powerful magnifier I could see a minute dark point projecting from the inner surface of the lid. With a sharp knife I shaved off a film of the mucous surface, having the point of the sting sufficiently exposed to be seized by a pair of forceps, with which I drew it out, thus completing its passage through the eyelid. He has had no further trouble, but will hereafter follow my example, and wear a veil when he handles bees.

H. A. MOODY, M.D.

Longtown, Panola Co., Miss., June 14, 1881.

NEW SWARMS ABSCONDING.

I will tell you how I cared for swarms that wished to leave for parts unknown. I put them in a secure place sheltered from wind and sun, and covered them with a wet sheet, and kept it wet and well tucked in, so they could not get out for three days, and kept them several times from leaving. When they wish to leave they are generally uneasy—don't act quite right. Sometimes it is too warm or windy, and combs break down. MARY.

Independence, Cuy. Co., O., June 19, 1881.

Why, friend Mary, would you keep the poor fellows idle three days, with the clover "booming"? If I had them, I would expect them to earn almost as many dollars in that time; and if they would not stay and go to work otherwise, I would divide them, giving each part a comb of unsealed brood. This will surely hold any new swarm, no matter how crazy and excited they are.

BEES COMING TO A WELL-KEPT APIARY.

The 2 lbs. of bees came all right in good condition, and are doing well. You gave me good weight. Many thanks. Yesterday a large swarm of Italian bees came from your direction, and settled on a tree in my yard. Did you send them? I like that way of sending bees, as it not only saves the original cost, but express charges too. They must have come a good distance, as I know of no Italian bees in that direction in this county. I was in Rev. Mr. Ballentine's apiary last week. He wintered all his stocks, and is making a good thing of it this summer. I shall let you know by and by how my bees are doing.

North Salem, O., June 17, 1881. J. W. MARTIN.

I didn't send the bees, friend M., but I am glad they went there, especially as they are good Italians. Is it not queer how they sometimes come to a body in that way? and, if I am not mistaken, you think more of that colony, that seems to be a sort of present that God sent you, than any other in your yard. Is it not so? We get several runaway swarms in that way almost every year. I tell the boys it is because they think this is a good place to stay.

WITH THE BIGGEST CROWD.

Referring to your Postscript No. 2, in your May No., I wish to say I shall try, with God's help, not to be in a like position next spring; but, alas! we know not what a day may bring forth; and although not quite so badly off as friend Rodney, of Dayton, Ohio, still I feel badly enough at my success thus far. In the spring of 1878 I invested in 20 swarms of bees, and Italians at that; they increased to 41; losses during the winter, 27; last winter I lost only one swarm out of 44; then "the goose hung high." Sold during the year, bees, $24.00; honey, $6.00.

Went into winter-quarters last Nov. with 59, good, bad, and indifferent; this spring, hearing from all sides discouraging reports, it was with fear and trembling that I approached my bee-house to open up. Out of 59 I found 10 alive and well. Nearly all my neighbors' are in a like condition. I have no objection to being placed in Blasted Hopes when such men as Townley and yourself are there, and from reports, I think the largest crowd is there also.

A. W. WILLMARTH.

Embarrass, Wis., June 5, 1881.

Notes and Queries.

THE swarming season is over here, and I think that not more than one-tenth of the bees of Southern California have swarmed. Bloom is abundant, yet there is almost no surplus coming in yet. Many think we are going to get no honey, and it seems the general feeling is, we will not have more than half a crop at most. R. WILKIN.

Ventura, Cal., May 15, 1881.

THE CALL FOR BEES.

Bees are doing well. After selling 247 of the best colonies that have ever left my apiary, I have already increased the remainder to about 325, and still 3 weeks before basswood blossoms. Bee-keepers are alive, anyway, even if bees are all dead; for I am besieged with orders daily, but must positively refuse to fill them. GEO. GRIMM.

Jefferson, Wis., June 17, 1881.

I caged in a very hurried manner, and shipped 10 one-dollar queens yesterday; hope they will reach you safely. Please report immediately. I have adopted a rapid way of capturing the queens and attendants by placing the cages over them as they rest on the comb, then cautiously sliding the lid on. I get them in faster, and there is no danger of crushing them. MRS. B. H. LOWE.

Hawkinsville, Ga., June 16, 1881.

[Every queen was in prime order, my friend, like almost all you have sent, and I would say, for the encouragement of the ladies, that Mrs. Lowe has sent us the most early queens of any of our queen-breeders, North or South, and no one, unless it is our friend Viallon, has had such invariable success in getting them through alive.]

We wintered 34 colonies in the cellar, without losing any. DEWITT BRAYTON.
Sandy Hill, N. Y., April 11, 1881.

I had a swarm of bees yesterday; that is 20 days earlier than usual for this section.
Centreville, Ia., June 2, 1881. G. B. REPLOGLE.

My best colony has stored over 40 lbs. of surplus in about 4 days. L. W. VANKIRK.
Washington, Pa., May 30, 1881.

A hot wind blowing from the desert now makes it quite probable that we will get no surplus honey this season. R. WILKIN.
Ventura, Cal., May 18, 1881.

HONEY-DEW.

Honey-dew has commenced falling, and bees are busy. I find it only on white oak. Why is this?
Poteau, Ark., May 17, 1881. H. C. BETHEL.

I have wintered 125 hives of bees this past winter without losing one. Can you beat that in Ohio?
DR. F. LEASHIER.
Hooper, Broome Co., N. Y., April 26, 1881.

Bees in our county, 80 per cent. dead. Our own, 50 per cent. Cause, dysentery, with a few starved. Those alive are doing finely. Have 18 colonies living. H. H. LAURENCE.
Columbia City, Ind., June 9, 1881.

BLACKS FOR WINTERING.

Black bees seem to have wintered here better than Italians. The latter dwindled down so much in the spring that they are very weak. J. H. MARTIN.
Hartford, N. Y., May 19, 1881.

I see in GLEANINGS you offer free advertisement for those who have bees to sell by the pound. Please give this room: Italian bees, 75c per lb.
BRIGHT BROS.
Mazeppa, Minn., June 14, 1881.

POLLEN AS ONE CAUSE OF THE MORTALITY.

I have been handling bees for forty years. I think the pollen did more damage than the cold. The few colonies that I saved had the least amount of pollen.
W. G. WRIGHT.
Delphos, Ohio, June 9, 1881.

I will furnish bees at $1.00 per lb. after the 15th of July, in lots of not less than 5 lbs., put up in good shape to ship, and delivered at the express office. I think now I could furnish *one hundred bushels.*
H. R. BOARDMAN.
East Townsend, Huron Co., O., June 16, 1881.

HOPES NOT BLASTED, AFTER ALL.

I lost all of mine this winter—104 skeps. I have to start off anew. I have bought 86 to start.
JAMES MARKLE.
New Salem, N. Y., May 16, 1881.

[I should call that philosophically cool, friend M.; but I presume it is the best way to take it.]

CHEERFUL STILL.

I have fared no worse than the majority, having 76 in winter quarters, and came out with 10 stocks; but they are doing famously. Being a young man, and just starting in life, its pretty severe on me; but this world is full of disappointments, and we must bear them cheerfully. ED. F. CHRISTIE.
Maple Landing, Ia., May 18, 1881.

PRETTY WELL FOR RAPID INCREASE.

I commenced in 1880 with 10 stands, and increased them to 37, and came through the winter with 31 by giving them very close attention. I do not claim to be a beginner. I wintered on summer stands.
Pomeroy, O., May 29, 1881. S. E. BAILEY.

We are having a very wet spring, and the white clover is very promising; but "the laborers are few." Bees are weak. I have 90 out of 120 last fall; have drones flying. Some hives have 8 to 9 frames of brood. I think the prospect is good for a crop of honey. J. B. RAPP.
Owensville, O., May 9, 1881.

Since the advent of June, the weather has been cool and wet; white clover very abundant, but very little honey in it yet. We've been making "bees by the pound" by feeding, night and day, all the diluted honey that the bees can be induced to take.
MRS. L. HARRISON.
Peoria, Ill., June 6, 1881.

COLORADO.

Bees are booming here; some hives have sent out their second swarm. But few died last winter. I am afraid the grasshoppers will play havoc with our surplus pastures; i. e., cleoma.
CHAS. E. MCRAY.
Canon City, Col., May 16, 1881.

SECTIONS ON ALL WINTER, ETC.

Our bees have wintered very well; did not lose any from the cold; lost one that was disturbed by a mouse. Kept section boxes on all winter; wintered on summer stands. My friend Bacon lost 120 out of 140, part in bee-house. CHARLES TOBIN.
New Washington, O., May 10, 1881.

A LARGE HIVE.

I have a box hive which is entirely full of combs, and strong in bees, which I expect to transfer in a few days. It is a curiosity in size, being 2 ft. 6 in. high, 18x19 in., made of inch boards. Contents in the clear, 7688 cubic in. FRANK J. BELL.
Moosehead, Luzerne Co., Pa., June 3, 1881.

CHAFF.

I wintered 21 hives in a chaff bin 40 feet long by 4 feet wide; they came through all right, less one or two. Bees wintered very well in this, considering the care they got. They are making honey fast here now for this time of the year.
W. G. RUSSELL.
Millbrook, Ont., Can., May 6, 1881.

My wife is the bee-keeper. I am a cripple from rheumatism. I have not stood on my feet for nearly four years. She wintered all our bees successfully.
C. W. MILLER.
Grattan Center, Kent Co., Mich., May 19, 1881.

[May God bless the wives, friend M., and may he help you to bear your affliction until it is his will you should be on your feet again!]

CANDY FOR BEES.

I commenced feeding your 10c bee candy early in the spring, and fed as long as the bees would take it; in fact, left it on until June 1st. Result: 1. It stopped dysentery immediately; 2. The colonies were stronger than I ever had them for the white clover. I lost about 50 per cent of my bees last winter; had 30 colonies last fall, and 19 in the spring.
JNO. W. BAILEY.
Bridgeport, Harrison Co., West Va., June 16, 1881.

FILLING THE TIN BOTTLES TO GO WITH POUNDS OF BEES.

We use a Davidson "family syringe" to fill the bottles. Submerge the nozzle of the syringe, also the bottle; holding the nozzle a short distance from the opening, the absence of escaping air bubbles shows that the bottle is full. E. M. HAYHURST.

Kansas City, Mo., May 20, 1881.

L. C. ROOT'S REPORT ON WINTERING.

Too busy to make full report. Our bees are out. We lose 10 per cent indoors. All starve. Have consumed from one-third to one-half more honey, than during past winters. We have doubled and lost 10 per cent more since putting them out.

L. C. ROOT & BRO.

Mohawk, N. Y., April 29, 1881.

[In an editorial last month, I gave the loss as 10 per cent. As I was unable to find friend Root's card just then it has since turned up, and I give it as above, as I am sure he would wish it correct.]

1. Who invented foundation?

[An account of the invention of fdn. was given in the *Bee-Keepers' Magazine* a few years ago, and it seems it was originally discovered by Mr. J. Mehring, of Germany. Of course, it has come, like other things, by slow steps and the united work of so many people, it is almost impossible to give full credit to all who have had a hand in it.]

2. Will not water-lime cement do to make fdn. plates, instead of plaster of Paris?

[Water lime has been used, but I believe does not stand as well as the plaster.]

3. Can you make your rubber plates to make the thin, flat-bottomed fdn. for sections, if not larger than 4 in. square? W. W. BLISS.

Los Angeles, Cal., May 22, 1881.

[The rubber plates now make beautiful thin fdn. for starters, by simply pouring on a table-spoonful of wax, and no more. If put on the center of the lower plate, and then closed quickly, it spreads out into a beautiful thin sheet, and a single spoonful can be made to cover nearly a square foot of surface.]

The "Smilery."

This department was suggested by one of the clerks, as an opposition to the Growlery. I think I shall venture to give names in full here.

THAT is it; stick to chaff for wintering. I had 76 colonies in your chaff hives, and lost only 7, and 4 of them were queenless last fall.

Geddes, N. Y., May 31, 1881. F. A. SALISBURY.

That "variety is the spice of life," but few will controvert. That variety is the "spice" of every paper or journal, whether it be devoted to bee culture, agriculture, horticulture, or any other "culture," is equally obvious. All this may seem irrelevant to a report on bees; yet these are the very thoughts that have led me to write.

Your journal has been getting exceedingly monotonous during last six months (in the matter of reports only, I mean), and has been pervaded by a spirit of gloom, cast over it by the misfortunes of the fraternity. I wish to break up this one-sided business, and will give you a few facts in my experience that will, I anticipate, entitle me to a front seat in the Smilery.

The cartoon of friend Rodney, in the May number, reminding one of the "Knight of the Sorrowful Figure," gave a new impetus to my slumbering genius(?) for drawing, and I hastily snatched up a pencil and involuntarily drew a picture quite the reverse of that. I will not exhibit it to the public; suffice it to say, that it showed about six inches of "ivories," which would seem to indicate a very happy state of mind.

In the summer of 1877 I bought a very weak hive of bees, common blacks, and, by dint of great care and watchfulness, built them up to a splendid colony by fall. The next season I purchased an Italian queen, and by that means succeeded in changing my black pets into a hive of very respectable yellow ones. I had no increase by swarming the first two years. In 1879 I bought one more colony, and got two magnificent swarms. They went on multiplying until last fall, when I went into winter-quarters with twelve colonies in prime condition, and one rather weakly one. You know last summer was a very poor one for honey, but, notwithstanding this, I took 250 lbs. of surplus from them, leaving them ample winter stores.

My plan of wintering is this: Leave them on the summer stands, and build a rough board roof over the top, packing them well around with corn fodder or straw, and not disturbing them at all during the winter. I have the satisfaction of now reporting twelve apparently strong colonies on hand — the number, you will see, is minus the weak one only.

Well, excuse this tedious report, friend Root, and, when you drop it into the waste-basket, let this reflection modify the uprising of your outraged and long-suffering good nature, that I am an amateur in rhetoric as well as in bee-keeping. E. F. SETFORD.

Creekton, Ohio, May 9, 1881.

Ladies' Department.

AT this late date I think I can submit a correct report. Had I written Feb. 22, I could have said, with excusable pride, "My 15 colonies are all alive and in good order," and perhaps, being a woman, gained the praise as Mrs. Harrison did. But the month of March worked a change. April 8th was a fine day, and I discovered one hive (which I had overhauled and given extra wrappings in Feb.), to be very quiet. On examination, every bee was quiet, and great numbers lay on the bottom-board. I brushed all off the combs, and carried hive and combs to the house, picking out the queen, a pretty, yellow one, not without a sigh, and laid her carefully to one side. Two hours afterward I passed the place, and the queen and several bees had revived.

Lesson No. 1. Not to be too hasty in pronouncing bees dead because they are still; but let sunshine revive them.

Now for the cause of that colony dying. Before Feb. 22, they had dysentery badly, which destroyed numbers. Then I shoved the frames too closely together, and but few could get between the combs; also, winter passages were not made in the combs of that hive—a neglect which was not noticed when I looked at them in Feb. I think those winter passages are very important; I shall remember that lesson another time. The 1st of May I found a colony of blacks, very weak and queenless; also my pet queen of Nellis, with but few adherents, and surely dwindling. I united the blacks, and was much amused to see how beautifully they behaved toward the Nellis queen, circling around and bowing low to her, and offering food immediately. I expected a quarrel between the blacks and the few Italians; but no: without caging or smoking, they took up with their new abode, and in an hour were carrying in pollen, and now how jealous and cross they are when I open the hive!

I wintered 4 colonies, or, rather, nuclei, in the cellar. They had so little honey I felt sure I must feed during the winter, and so put them in the cellar as an experiment. I am satisfied my cellar will keep bees better than outdoor wintering. They consumed much less honey; were not troubled with dysentery, and are among my strongest and best colonies. Box hives have suffered. The doctor has lost all, so if I had time to bother I might safely Italianize now, without fear of hybrids. But, I am teaching school; and if you will tell me how I can manage swarming, with no one at home while I am at the schoolhouse, I will be so glad. I have an extractor, and I have clipped 5 queens. I fear I may fail to keep them, even if clipped; but there is one satisfaction—they certainly can not go to the woods to occupy hives set up to decoy them, and thus enrich the apiary of bee-keepers who will not take a journal nor try to keep up with the times. But I don't want to lose my pet Italians if I can help it. Bees worked on and gathered stores from apples. Thousands of bushels lay on the gound last fall, and rotted. That may have been one cause of so much dysentery, every hive wintered out of doors being more or less affected in this region. After all, I like the old Simplicity best of all hives. The 1½ story hive is not satisfactory to me.

Another year I intend to stay by my bees, and do better by them; but as I must be in the schoolhouse during June and July, I do not see what I can do with them, except hire some one to watch them for me.

MRS. T. M. SQUIRE.

Redding, Ct., May 23, 1881.

Well, I thought at first it would be a pretty hard matter, my friend, to tell you how to manage an apiary while you were in school; but you can certainly do as we do,—raise queens, and sell bees by the pound. This is certainly a most effectual way to prevent swarming, and it is a pretty good way to prevent wintering too. I don't know that it would do to ask Doolittle to help solve your problem, for he stays home from church swarming time. I presume if he were a school-teacher he would stay home from school every day; and I am not sure but I should too.

WHAT WILL LESS THAN ONE POUND OF BEES DO ON THE FOURTH OF JULY?

The question has often been, what a pound of bees will do in a season. I can not tell what a pound of bees will do, but I can tell what *less* than that many bees did for me in 1879—the poorest season I have ever seen in the twenty years I have kept bees. In the month of March I found one of my swarms was queenless, but it had a queen-cell which hatched in good time. She proved a drone-layer. What became of her I do not know; but by the first of May they were again queenless. The hive filled with drones, and, the few workers that still stayed in the hive growing less every day until the 16th of June, I then put a queen-cell in the hive, and one card sparsely filled with worker brood capped over. On the 4th of July I opened the hive; there was the queen and the workers, a handful in all; the drones all gone, and no brood. They now went to work for several days. There seemed to be but one bee that worked, but she did her very best. By the first of August there was quite a colony at work. In the fall, when I packed them, they weighed 71½ lbs.; came through the winter strong and good; I expect they will swarm every day; am now watching them from the window while I write. In packing bees for winter I take off the cloth and put the crate that holds the sections or empty boxes under the cover, early enough for the bees to make all tight—always keeping them on their summer stands, about four inches from the ground on the lowest side, and six on the highest.

ALZAIDA.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

ALL my 23 colonies dead but one—on my road to Canada. Oh! say, friend Root, I nearly forgot! Can't you send me a present of a nice colony? You are a pretty clever old "felly," I think. If you do, be sure to send a good one. Don't get huffy—you know we must ask if we receive, and knock before the door will be opened.

JOHN BAKER.

Saxonburg, Butler Co., Pa., May 11, 1881.

You are right, friend B. I am real glad to know you do want some more bees, and I really think you ought to have them; but after studying some over the matter, I am convinced that God sees it will do you and me both more good to go to work and earn them, than to have him give them to us without such effort. It just occurs to me, that there is another reason why *I* should not give you one. I have so many friends in the same boat as yourself, it would make me a poor man; and then, I lost about all my own too. Why, come to think of it, I have as many excuses to offer as the woman who would not lend her tub. She said it was broken, leaked, and was full of water; besides that, she hadn't any, and wanted to use it herself.

Your card received. Thank you for your kind words, but my bees are dead. I don't know of any more in this county, yet there may be more. I have sown some white clover a friend sent me, and when it blooms I will often think of bees, and will, if I am able, try them again.

J. B. HARRIS.

Plum Creek, Neb., May 15, 1881.

I thought a few lines from this locality concerning bees would be of interest to bee-keepers, so here it is. Box stands for box hives; G. F., Gallup frames. L. for Langstroth.

	LAST FALL.	SPRING.			LAST FALL.	SPRING.	
S. Forst,	13	0	G. F.	L. Fossey,	40	0	G. F.
B. Brink,	37	2	G. F.	A. Whaley,	11	5	Box
E. Lloyd,	35	19	G. F.	H. Pomeroy,	5	3	G. F.
W. Snow,	11	1	G. F.	S. Cottrell,	12	1	Box
N. E Cottrell	9	2	L. F.				
Total	-	-	-	- - - -	170	36	

N. E. COTTRELL.

Fayette, Ohio, June 7, 1881.

Our Homes.

He that endureth to the end, the same shall be saved.—MATT. 10:22.

FROM what I have written in regard to those whom it has pleased God to permit me to direct to the ways of salvation, it might be inferred that all are saved with whom I have labored and striven. Especially might this be the case with those whom I have met in jail, and finally taken into my employ. I presume you all know, dear friends, that it is a much pleasanter task to chronicle the way in which a sinner forsakes his sins, and sits, "clothed and in his right mind at the feet of Jesus," than to tell how he forsakes his new life, and goes back to the camp of the enemy; but for all that, I feel that I should hardly be truthful if I contented myself with telling the former, and leaving the latter untold; for, besides being in duty bound to give you truth and facts, we may often draw helpful lessons and timely warnings by noting the downward course of those who will go back.

Last February I told you, in the Home Papers, of a young man whom I called "D." Well, in the April No. I mentioned both being present at our Saturday evening meeting—just we three, and that we had all knelt together, before God, asking him to keep and guide us. Up to that time, I feel sure D. was in the straight and narrow path. He had not united with any church, as had M., but he was regular in his attendance at the young people's prayer-meetings, and usually took a part. During those days he was honest, bright, and happy, and it was particularly noticeable that he had lost all of the disposition to be bitter and sarcastic in speaking of his fellow-men, as he was when I first met him.

My friends, I wish to digress a little here, to again emphasize the point, that it is always those who are guilty at heart who are so very vehement in denouncing the world, and especially the Christian people of the world, as hypocrites and thieves. In fact, whenever you feel like saying there are no honest people anywhere, bear in mind the trouble is surely in your own heart. Repent and reform, and you will find good, pure, and true people everywhere.

The first thing I noticed about D. that troubled me was his showing me a picture of a woman he was corresponding with. Was there any thing wrong in this? I confess, I could see nothing to object to, but yet it gave me a feeling of trouble, without my being able to say just why. I knew that he had once been married, but he told me his wife was dead. He also said he was engaged to her. Shortly after, he asked me, one Saturday evening, if I were willing he should go to Cleveland to stay over Sunday with his brother. Said he,—

"Mr. R., I came here to stay with you, and to learn to be a man and a Christian, and I won't go an inch anywhere, without your consent and approval."

I thanked him for his confidence in my poor judgment, but told him to go, by all means, and tell his brother's folks, when he first met them, that he was a Christian, and wished to go to church. My friends, you do not know, all of you, as I do, how important it is that you should always, under such circumstances, speak out at once, and proclaim yourself "on the Lord's side."

Whosoever therefore shall be ashamed of me and of my words, in this adulterous and sinful generation, of him also shall the Son of man be ashamed, when he cometh in the glory of his Father with the holy angels.—MARK 8:34.

There is no bragging or boasting about it, but it is simply giving all your friends to understand just where you are; and while it will often touch them, and pull strongly in the right way, it will prevent most effectually even those who are unconverted, from throwing any kind of temptation in your way thoughtlessly. I do not know whether D. did all this or not. Shortly after, he asked to visit some friends in another direction; and as I had seen nothing amiss, I of course gave consent. The next Sunday, after Bible class, he came to me with the confession that he was a married man, and had been all the time he was in prison; but having lost track of his wife, and her whereabouts, he was ashamed to tell that he was married.

"Why, D., you told me you were engaged to the woman whose picture you showed me."

"Oh! I was just joking then. I never told you I wasn't a married man."

"But you told me your wife was dead, and we have all of us here in the factory considered you as an unmarried man."

"Well, she was dead; but I did not say I had not married again. Here is a letter from her, and you can see her signature as my wife."

I tried to explain to him that his actions and life had proclaimed him an unmarried man more plainly than words could do, if possible; and that he stood before God, if not before men, as guilty of untruth. He confessed, and once more asked what he should do to retrieve the past, and commence once more on a fair and square foundation. I looked him squarely in the eye, and I confess I did not feel quite satisfied with such a ready confession and swift promises to amend; but what should the boy do? He was once more placing the whole matter in my hands, and said he would do exactly as I said. I wish here to pay one just tribute to D.'s credit. He was a splendid hand to work at any thing; and no matter what you set him at, he did a tremendous day's work, and did every thing he took hold of well. He would even take charge of hands, and look after them with the eye of a proprietor; and at night I was always sure to find a straight and honest result of the labors of the day whether he was looked after or not. I need hardly tell you that all who profess to be Christians do not do as much. Well, it was this feature of D.'s character that gave me faith in him, in spite of his wrong-doing.

"I will do just what you say, Mr. Root, for I said I would stay with you and show you and the world that I could be a Christian, and I am going to do it. What shall I do, as the matter stands?"

I did not ponder long before I told him it seemed to me he should go at once and get his wife and stand by her as he had promised before God when he married her. He said he would go the last of the week, if I thought it best; but I told him I would advise him to go and get her the very next morning.

Our Abbeyville Sabbath-school is now going again nicely, for God opened the way, and removed all opposition to it; and as D. had never been with me, I invited him to go with me in the afternoon. I went up and told our pastor of the advice I had given, and he said he thought it was, under the circumstances, right. D. went with me to church, and it seemed to me the sermon was one that must have moved the heart of a guilty man, if ever a sermon did. At the close, D. said he would like to be excused from going, on account of a sick friend that he was going to stay with. My wife remarked, as he went out, that D. had a bad look in his face. I reproved her for uncharitableness. Monday morning, before I was up, a knock at the door wakened me. It was D., who said he had been thinking so much about his wife that he could not rest, and, with many apologies asked the loan of $5.00. It was the first request of the kind he had ever made, and I granted it most willingly, being glad to do him a service. Before the train left, however, I heard a rumor that he had been in a drunken brawl the night before, and went to him about it. He denied it so promptly, I again decided him to be innocent, and he left. After he was gone, I found that, instead of staying with a sick friend, as he told me in church, he had hired a livery, taken one of my own reformed boys to a neighboring town, where they could get liquor without stint, and D. had then remained up all Sunday night. I was completely put out, and, although I did not lose faith in God, I lost faith in humanity, and also in my powers of converting sinners from the errors of their ways. I presume this latter did not hurt me any. D., true to his promise, although contrary to everybody's predictions, came back the next day as he had promised He acknowledged his fault and admitted it all, but declared he was as sorry as anybody could be, and asked just one more chance to show he meant it, and to support his young wife, that he had just brought to her new home. He said he would not ask me to take promises, but if I would let him go to work again, he would show me how much in earnest he was. What should I do? He went to work, and, as before, redeemed his shortcomings by vigorous strokes.

About this time he was seen smoking, but, after a rebuke, he confessed, and asked to be allowed to start again. I was introduced to his wife, and he took her to prayer-meeting and introduced her to our minister as his wife. He was very anxious to go to housekeeping at once, to save expenses, and begged me, as I never was begged before, to give him just a little credit, that they might get started. Although I was strongly moved to do so, I told him, kindly but firmly, I could not trust him nor could I take his word more, until he had, by weeks of steady, faithful work, shown himself worthy of trust and credit. About this time, conjectures began to be made that he was not married to the woman he was living with. I asked him for proper proof, and he promised to get it; but at the same time he spoke bitterly about "folks not minding their own business." The proof did not come; and when I insisted that he must bring it or confess he was doing an unlawful thing, he declared he would send her away and go himself, as soon as he had earned the money, to some town where people had "sense enough to mind their own business, and let those alone who were doing them no harm in any sort of way." I explained and plead with him, as I used to do in jail; but the D. I knew in jail, I began to be painfully aware, was not the D. I had with me now. He sent her away, thinking that would make it all square; but I explained to him, at length, that we could not have a man among us on whom such suspicion rested, and that the proof must still be given, or he must confess. Another thing: I felt the more troubled that the women of our establishment seemed disposed to treat him with a kindness and courtesy that he did not deserve, doubtless because I had, on his first coming, begged them to be kind to one who, coming from a bad and wicked life, was disposed to struggle for a better one. They doubtless (at least the most of them) considered him a pure man, or he would not be in our midst. Finally he admitted he was not married, although they had lived together as man and wife for more than a year and a half, and had one child!

The confession had come; and now, could he go to work quietly?

"D., you know that I am disposed to overlook almost any offense, and to forgive as I hope to be forgiven; but the good of our establishment, especially the girls who seem to feel a friendly interest in your welfare, demands that I should at least ask for some evidence of real sorrow for your sin and crime. Why did you object to marrying the woman you were living with?"

No answer. When I plead with him he tried to turn it off with a laugh one moment, and when he saw I would not smile, again turned bitterly on the world, and intimated it was a trifling thing, and did nobody any harm. A few weeks ago, we knelt together side by side; yes, side by side, but *now* we were thousands of miles apart.

"D., you and I once thought alike. You said you would like to work under just the strict regulations we have here. You thought so then, but I am sure you do not now; *now* it is a bondage to you. You prefer to use tobacco, to go to the saloons and drink, when you choose, and, to go further, to live with one woman awhile, and then take up another. Am I not right? Now, in view of this difference of opinion, as we will call it for convenience just now, had we not best part? Let us put it like a couple of boys who are trading jack-knives. We can't agree, and we will not try to trade any longer. Is this not the best way?"

"Well, Mr. Root, what must I do to stay here? I do not want to go away anywhere else."

"What must you do, D.? It seems to me that it is your duty to go at once and marry that woman, the mother of your child. I do not see how else you can stand right in the sight of God and your fellow-men."

A queer smile came over his face at this, and I heard afterward that he complained of the severe penalty I had imposed. Others, too, have smiled at my plan of remedying the evil; but it seems to me a man who would live with a woman to whom he was not married has no right to complain of being obliged to live with her as her husband.

He thought he had better go away, and I thought so too. I turned back, however, and said,—

"D., you know I am right. You know it is best for a man to have *one* wife to love, cherish, and support, and you agree with me, at least in heart, if you do not in actions, do you not? Come, let us part friends, in any case."

"Yes, Mr. Root, of course I know your way is best."

"And, D., when you hear my name mentioned, you are not going to blame and speak ill of me. I will try, too, to speak of your good qualities and not your bad ones. You know what a Savior's love is; but, my friend, you have left it, and I fear you are going straight to the prison again. Think on these things, and remember I shall not forget to pray for you."

My last view of him was as he left on the cars, with a cigar in his mouth. While writing this I thought, many times, that his eye might some time reach these lines, and I have tried to make them truthful; but if he sees aught in it to criticise, I hope he will forgive it, for I have tried to give the substance of it, if not the words.

The lesson for us is, that we are to be very careful of the first wrong step. Note how quickly Satan came in after D. had first gone back to a companion of his bad days. It is said a bad woman has tenfold the ability to work ruin that a bad man has. After he met her, drinking followed almost inevitably; and with the consciousness of this guilt on his soul, it was easy for him to tell me the first falsehood; easy for him to listen unmoved to that soul-stirring sermon; easy to hire a horse right after, and go off on Sunday with a weak reformed man; easy to see him back again in the hold of Satan, and then he hated and sneered at the whole world of Christian people.

You never, *never*, NEVER, can be a Christian while you hold a single sin in your heart, concealed from God and your fellow-men. It must be a whole heart surrender, or it will never avail.

I the Lord thy God am a jealous God, etc.—Ex. 20:5.

You thought me vehement, my friends, when I first took up the cross before you here on these pages; but you little knew how life and death stood before me. I was sometimes tired and wearied with my struggles with and against Satan; but you can not tell the joy I feel now and then when I look back and see that these fights with so many different temptations were only bricks laid in a foundation for future usefulness. You know how much I have spoken about my besetting sin of fretfulness and impatience; well, for the past few months I have been almost entirely delivered from this. I say it tremblingly, for I expect Satan will give me some fearful tussles, just to pay for my having said this much; but, "the Lord is my shepherd." I fear I have been a little proud of the success of my jail work; but I am humbled now, and have been taught a most useful lesson. Blessed be the hand that afflicts and chastises, for we read,—

Whom he loveth he chasteneth, and scourgeth every son whom he receiveth.—HEB. 12:6.

TAKING THE NAME OF GOD IN VAIN.

Dear Bro. Root:—I have just been reading your kind offer in last No. of GLEANINGS, to furnish to any one who would use them properly, cards with some pointed lines against profane and vulgar swearing. This is a good inspiration; may the Lord bless you for placing this means in the hands of his servants, for checking this very prevalent practice of blaspheming "that worthy Name by which we are called." I inclose stamped envelope. Please send me a dozen. Our neighbor's son across the way uses the most shocking profanity; but for this one fault he is a good, honest, kind-hearted, generous boy. His parents do not try to check him, and now the habit has grown on him, until a volley of oaths is his common resource for even trifling vexations. I have so often wanted to help him be ashamed of it, but could not see my way clear. There are many others who might be touched and helped in this way better than any other. Let us try, any way, and ask God to bless our efforts. Do you remember that I, through you, sent GLEANINGS to our foreign missionary, the Rev. A. Bunker, Tonghoo, Burmah, India? Well, we did though (you and I), and *he* writes and sends us his warmest thanks, and tells how much he enjoys it, and he is hunting up items and facts about the *three* kinds of bees in that country, and pretty soon he will send us a letter for GLEANINGS. Think of that now. I should like you to read his interesting letters about his work there, but I know you are too busy to read long letters. X. Y. Z.

You see, friends, I have omitted the name of the lady who wrote the above, for I wish to have every boy who swears, whose eye rests on these pages, imagine that it is some lady in *his* neighborhood that is writing to me in regard to it. A great many boys are constantly asking me for places; but for all that, when I wanted a trusty boy a few days ago to carry the money to and from the bank, I had to look quite a little while before I found one, among all the list of applicants, whom I liked to entrust with such a position. Do you think I would naturally pick out one who swears, one who smokes, or, if you please, one who lounges about the streets and hitching-posts on the Sabbath, while people are at church?

MERRRYBANKS AND HIS NEIGHBOR.

THEIR FEET WERE SWIFT TO DO EVIL.

BEFORE I tell you of the mishap of friend M. with Mary on his shoulder, I shall have to explain that John and the doctor's boy—didn't I tell you they had a doctor in Onionville? well, they have one, and a very good doctor he is too, only, like a great many other doctors, he thinks himself too wise, or some thing, to be seen in Sunday-school, and he also, it is said, takes medicine quite frequently out of a bottle, when he isn't sick at all. Well, John and the doctor's boy had made a bargain with a farmer a little out of town to hoe corn for him until they had paid for a hive of bees. Under the inspiration of the bee fever they worked hard and patiently, and the farmer, who was a very good old man, gave them one of his best, heavy with honey and bees, as they usually are in the month of June. As soon as their task was completed, boylike they must have their bees home at once, and, although the farmer told them they were too tired to carry them that night, nothing would do but that they must be taken right along. With a little smoke they were all driven into the hive, and a sheet tied under the mouth, and the corners brought over the top and tied. Under the knots a stick was placed, and the boys started home with them, full of enthusiasm. It was at the close of a warm day, and they were tired before they started, and it was nothing strange that their zeal considerably abated before they got to the village through which they had to pass.

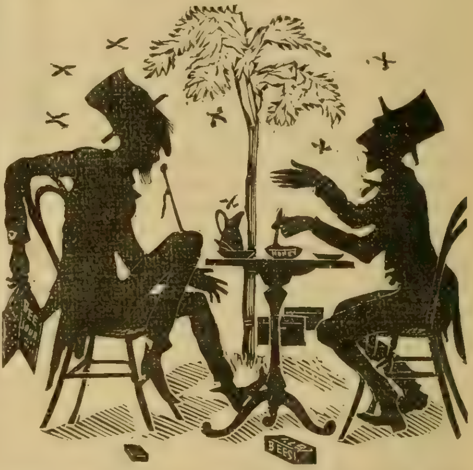
"O John!" said the doctor's boy, "I am awful thirsty; let us stop at the grocery and get some beer."

John knew his mother would feel badly if she knew he had been drinking beer; but he knew, too, that Tom would jeer at him if he said any thing about his mother; so he only made the objection that it cost money.

"But I will stand treat, and so it won't cost you any thing;" and before John could offer a word more, the bees were hastily set down, and the beer was ordered. They had been enjoined, when starting, not to set the hive flat down when they stopped to rest; but this they forgot all about, and down it went, the mouth in the soft dust of the road, closing every air passage through the cloth, which was already densely covered with panting bees. It was nearly dark when they got home, and John, being unlike the doctor's boy, not much used to even mild stimulants, had a headache that made him glad to set the bees down anywhere. Accordingly it was deposited on a corner of the doorstep. Just at this juncture some boys came along and called to them that they were going over to the doctor's to kill the toads that were eating up his bees. John objected, on the ground that their bees must be located and let out.

"Why, they can't fly any to-night," said one of the boys; "come on, and see us demolish the toads."

"We will have lots of fun with them," said another, and off they went, laughing and yelling as only a tribe of street boys can do. Down went the hive again, and off John and Tom put after them, tired as they were. Again was John led away against his better judgment, because he had not the strength of mind to say *no* when invited. After they had tortured and murdered all the toads and frogs they could find, the boys ventured near the doctor's house, where he and a brother-bee-keeper were discussing the cause of the losses last winter.



THE DOCTOR AND THE SHOEMAKER DISCUSSING THE BEE DISEASE.

John got home quite late; and as his conscience troubled him in regard to the events of the last few hours, he slipped in quietly and kept pretty still, until he became interested in friend Merrybanks' reading. By this time he had forgotten all about the bee-hive, and never thought of it until friend M. stumbled against it in the dark, as I told you last month. At the scream and commotion, John's mother brought a light, and friend M. was just picking himself up out of the dust, after having stumbled over the hive. Mary was, of course, unhurt, for he took good care to hold her up safely; but, oh my! what a looking sight was that hive! The combs were nearly all melted and broken down in one dauby, sticky mass, and bees as black as ink were dragging their daubed and sticky bodies through the dust, in hopeless misery. Friend M. looked just one second, and then gathered up the sheets, and stopped the poor innocents from getting out.

"Have you got a queenless hive, with plenty of empty combs?" asked he quickly of John's father.

"Yes, sir; two of 'em."

"Bring the light and guide me to them."

At this he lifted the sticky hive, and all went for the apiary.

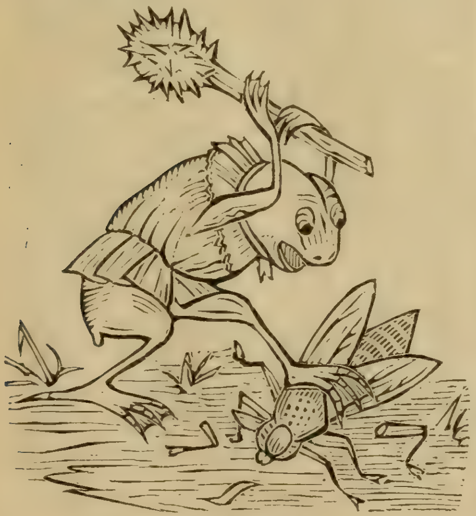
"John, put an empty story on this hive."

John was ready enough now to obey orders. The hive was on, and the bees were then carefully poured on the tops of the frames and astonished bees below. All hands soon set to work so busily licking up the honey, that they forgot to sting; and after the crawling bees were down in the hive, the combs were lifted carefully and set up against the sides in such a way that the bees could care for the unsealed brood, and the sealed could hatch out. In this way the whole contents were disposed of. Of course, bees kept crawling up the sides of this second story, but John brushed them back while his father held the light at a little distance. After the hive was pretty nearly empty, friend M. set it down, and asked for the other queenless colony. With a quick but quiet movement, this colony, being in a Simplicity hive, was raised and set over the one containing the drowned bees, and not a bee was mashed, nor could one more crawl out in the dirt without coming through the bees in the lower story of this three-story triple colony of bees.

"But won't they fight?" said John.

"No danger of fighting, with all this mass of honey to take care of," said Mr. M.; and he moved the whole back a little so as to give a larger entrance. "The daubed bees will naturally crawl upward, and are sure to get licked off clean, no matter which way they go. The bees from above and below will, unitedly, have every thing clean before morning, and the loose honey all put near the brood in the good combs."

The old sticky hive was then set over a colony, with a good queen, and all went home. I do not know what the rest of them dreamed when they got to sleep; but poor, tired, sticky, guilty John dreamed he was a queen bee pursued by a great monster of a toad with horrid eyes and a great club. This club was full of sharp spikes, and as he raised it over him, John distinctly recalled the look of the poor toads as they dealt them blow after blow, without mercy, just the evening before.

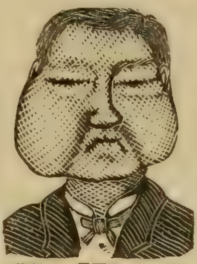


JOHN'S DREAM.

With a scream of terror John awoke to find it was only a terrible nightmare, and, what was more strange, it was his mother's soothing voice that quieted his nerves and bid him tell her all about it. How came she there at such a time of night? She came to pray for her boy at his bedside, as she had so many times before, and God had answered her by so ordering it that she should be there at just the time, of all others, when John would be most likely to tell her of his first steps in sin. He told her all about the events of the evening, and promised her not only to never allow another drop of beer to pass his lips, but to carefully avoid the society of bad and wicked boys, even though he had to stay at home without company at all. Before going back, she opened her little Bible and read,—

"My son, if sinners entice thee, consent thou not," etc.

Friend M. came over in the morning, and John just laughed to see that all the bees were clean and comparatively bright. The hives were taken apart, and each restored, as near as it could be, to its original place. The brood from the box hive was nicely put into frames, and as half the hive belonged to Tom, the stock was fairly divided, giving Tom the queen, while John had a capped cell in his. Tom came after his colony in the afternoon, bringing a lot of boys with him. When some instruction was offered him in regard to moving them, he declined listening, saying he knew how to handle bees as well as anybody. He would not even accept the loan of a veil or smoker, saying his father never used any such things, and he knew how. I really can not spare the time to tell you how Tom prospered with his bees, but I will give you his picture as he appeared next day.



TOM, THE DOCTOR'S SON.

Good-bye, kind friends, until next time.

TOBACCO COLUMN.

I BELIEVE that I have smoked with my mouth long enough, and as my Simplicity is gone, I need a smoker. If you choose I will take one on your offer to smokers. I do not wish to pledge myself positively to never smoke again, for I can not tell what may be brought to bear upon me—influences I mean; nor will I agree to pay for five nor two; but if I return to the pipe, I will pay promptly for the one I get. You may send me a Quinby double-blast this time, good size; and if my smoker pledge is not strong enough, why, just charge it up to me. J. L. COLE.

Carlton Center, Barry Co., Mich., June 14, 1881.

All right, friend C.; your promise is enough. May the Lord help you to "put on the whole armor."

I think I will take some stock in that smoker business. It's a square stand-up bet, only I hold the stakes; but to off-set that I give odds of two to one; that is, you send me a large Bingham smoker, price $1.50, and if I use tobacco, either chewing or smoking, I pay $3.00, with interest on the $1.50 from date of receipt of smoker. I inclose 25c for postage. Now, to make the above square I must tell you that I have been in *training* about five months; so you see I have the advantage in the game. I am 54 years old, and have used tobacco since I was 18. I have often thought I would quit the use of the vile stuff, but never could make a start in the right way; your offer in GLEANINGS set me to thinking that perhaps now was the time if ever; so I tried it for a week. I found myself alive, and that was about all, at the end of the week, but with a resolution to "hang" to it. It's now over five months, and I think I am safe.

H. A. MARCH.

Fidalgo, Whatcom Co., Wash. Ty., May 31, 1881.

To be sure you will pull through, friend M.; you *will* pull through if you take it in the right way. It is not a bargain with me, but with God; for every one of you who stands out here before his fellow-men, and voluntarily makes this promise, if he considers his word good, he will of course keep it. Your honor as a man, before God, is the point in question; and surely no one would forfeit such a promise, publicly given, for a dollar or two. Look to God—not my poor self, my friends; and may his blessing rest upon the little band of you who have thus come out before men, to assert your freedom from the bondage of appetite. Thanks for postage.

I have received the smoker, and am well pleased with it. I have had a hard time of it since I burned the tobacco-pipe; but, by the grace of God, I am determined to conquer. Bees are doing well here; clover is in bloom, and they are bringing in the honey very fast. I extracted, on the first day of this month, from one hive 20 lbs. of honey, and they have filled 11 frames since, which beats any thing I have ever had since I have had bees.

GEORGE COLE.

Freeport, Shelby Co., Ind., June 6, 1881.

Don't falter, friend C. Remember the text,—

"He that endureth," etc.

You may put me in the smoker club if you like, as I quit chewing some time ago, and will quit smoking now.

S. P. RODDY.

Mechanicstown, Md., June 3, 1881.

Here is the smoker, friend R.; and may the Lord help you too, with all the rest of the little throng.

I see by GLEANINGS you are trying to induce your fellow-men to quit the habit of using tobacco. I do not smoke it to excess; but what I do use I think is no benefit to me. I see you will give a smoker free to all who will quit the use of it. Now, you may send me one of your largest cold-blast smokers, and I quit using the weed in any form this 4th day of June, 1881.

S. C. GATES.

East New York, Kings Co., N. Y., June 4, 1881.

I have been an inveterate smoker for years, and have tried repeatedly to quit the habit; but I never promised any one that I would—not even myself. Now, if you will send me a large-size Bingham smoker, I give you my word that I will not touch tobacco in any shape until I send you the pay for the smoker, and I think that won't be this year, as I feel pretty poor at present. I have only 13 colonies left from 41 last fall.

JOSEPH COOK.

Jackson, Mich., June 5, 1881.

You strike on a strong point, friend C., when you say that you have tried repeatedly, without mentioning it to anybody, and failed. A promise made publicly is pretty apt to be kept, if the one who promises has any regard at all for his word. Do not neglect to ask God to help you.

OUR OWN APIARY.

JUNE 3.—Still the orders continue to pour in for bees and queens, but we have no trouble in filling them all promptly, except where the dollar queens come in. Neighbor H. agrees to furnish us, during the month, 300 or over; but at present this is not going to be enough. Every one of our old customers reports having all the orders he can fill, but this certainly can not last long. I am expecting every day to see such heaps of them from all directions that we won't know where to put them. I shall be at least happy in having a laying queen in every one of our 160 hives, so we can set about getting ready for winter.

EARLY SIMPSON HONEY-PLANT.

Had I just gone over among them, I should have reported Simpson plants in bloom before our last journal went out, for I found bees busy working on them before white clover was out. Of course, they will be of little account, right during our clover and basswood bloom; but from what I have seen, I am pretty sure we may develop a variety to fill the vacancy between fruit-blossoms and locusts.

By the way, we have had a most bountiful flow of honey from locusts again this year, and it has lasted fully ten days, filling the hives with most beautiful yellow honey, and I have really got in the fever of having a locust orchard as well as a basswood. But would it not be splendid? Just think of the bees roaring on about two acres. I think two acres would keep a hundred colonies of bees busy. Who will start the first one? If you do not look out, *I* shall.

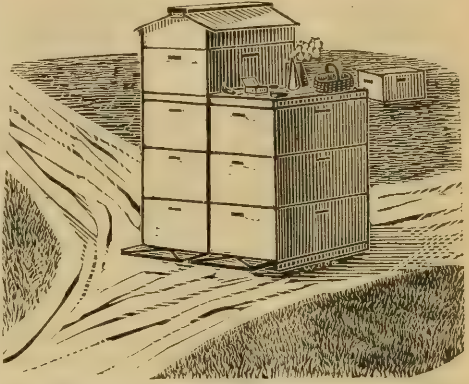
Neighbor H. has revived the old queen nursery, to be placed over a strong hive, such as I described and went wild over in the first volume of GLEANINGS. He uses only a broad board, like a Simplicity cover, for instance, and then bores it full of auger-holes; these holes are covered with wire cloth on the under side, and the board is then placed in a chaff hive, under the cushion. He says it is working nicely. The secret of it is, the chaff hive for protection, which I did not have in my earlier experiments. On the 25th of May, he sold a queen from a hive, and at once let in a newly hatched queen from this nursery. June 1st, he found her laying, and took her out and sold her. What do you think about the profit a hive or nucleus would give during the season, if worked in that way? with the great call there is every spring for bees and queens, I am really surprised to see so few making a success of it. Boys and girls, what ails you? It is the pleasantest and easiest way of making money I ever heard of, only it takes brains and energy, and getting up early in the morning.

13*th*.—Beautiful weather, and every thing is doing finely. The orders for bees and queens are beyond any thing we have ever heard of. We have purchased and divided until our colonies now number about 200; but we have sold off queens and bees until at one time the boys reported we had only about three laying queens to supply eggs for the whole apiary. Neighbor H. reports his apiary in much the same condition; and, although a hundred or more young queens will be laying in less than a week, the orders are so urgent we can hardly give them time to fill a single comb. Queens we get from the South are often introduced and then taken out and shipped before they have laid a dozen eggs. I mention this to show you how hard we have tried to help you. Beehives, sections, and every thing else in the bee line we have had no trouble in keeping on hand, for the stack of basswood in our lumber yard, nicely seasoned, has been equal to all emergencies. I presume I should have foreseen some thing what the call for bees would be; and we are now making plans to be abreast of orders another season. One bad feature of deals in shipping bees is, that they are perishable property, and must be taken from the office as soon as received. Well, if our customer is several miles from the express or post office, he is obliged to make a trip, or send, almost daily, until the goods come. It is true, he might have a notice there would be a delay; but he must be on hand to get these notices, and then he must make more trips, about the time the bees are expected to be on hand. I tell you, my friends, there is no way in the world to do business like having them all ready to go off the very day the order comes; and the man who will have bees and queens to send off in this way, will get the trade, even if he charges *double the price* that those do who have to write apologies about the weather, being sick, or absent from home, and the like. Are you listening to this, you who advertise bees and queens for sale?

Even at $2.00 per lb. for bees, the orders come pouring in; and after a man has had a package, and put them on his empty combs, and seen them go to work, he and his neighbors are sure to want another lot right off, and here we are, unable to send right back promptly. I am ashamed of myself, and, with God's help, I *will* do better next year. Why do not more of you take it up? I thought, when I said $2.00 per lb., somebody else would undersell me, and I should have a chance to get ready for winter; but here you are letting all this great trade fall into my hands when you who have time on your hands, and the requisite skill to do it, could make excellent wages at it, at just half the money. Here is a great field open to all those wanting some thing to do. Wake up, boys, and "make hay while the sun shines."

HANDY BOXES FOR TOOLS ABOUT THE APIARY.

A great many tools and implements are needed, especially in putting up queens and bees, and very often a shower comes up, or it comes on night, when you hardly have time to carry them to the house. Well, if you will look at the plan of our apiary, you will see, where the paths intersect, quite a little gravel space. On this space, we keep empty Simplicity hives for convenience. A bottom-board is nicely leveled up, and on these we can pile hives up any height. Well, 3 hives set on this bottom-board, and then a cover, will raise it just about the height of your vest buttons, and you will find it a very handy table on which to set your smoker or any tools, and being a conspicuous spot, you can always tell where to look. Now, to make it into a tool-box, you have only to set another hive over it, and put on the cover when it comes night, and all your implements are secure, handy, and dry in case it rains during the night, or, in fact at any other time. This stand and tool-box costs you nothing, for every bee-keeper wants at least a half-dozen empty Simplicity hives on hand constantly for emergencies. Below is a picture of a couple of them as they appear in our apiary.



SIMPLICITY-HIVE TOOL-BOX, FOR KEEPING HANDY AND DRY, SMOKER, BASKET OF ROTTEN WOOD, MATCH-BOX, QUEEN-CAGES, ETC., ETC.

IMPERFECT ADDRESSES.

A friend sent us $10.00 for four tested queens, which were promptly sent, but they all lay in his postoffice, and died, because he wrote his name so badly we called it "Borus" instead of *Barnes*. As we had his first name correct, and also the initial, it does seem as if his postmaster might have guessed the truth, when our friend had been calling day after day for his queens. Oftentimes a little importunity at express and post offices is a good thing. Ask your postmaster if there are no bees there for any one, and he will often pull out some thing that will prove to be just what you are waiting for. But the real trouble, my friends, is with you who will persist in hastily scrawling your names. This friend wrote us three times, and we got his three signatures together, but none of us would ever have made "Barnes" of it. It takes time to always write plainly, I know; but any printer* will print your whole name and address a thousand times on a small gummed label for the very trifling expense of $1.00, and then you need not write it at all, unless you choose. In this case, I stood half of the ten dollars; but, my friends, I give you fair warning, I can do it but a little longer.

---

* If they won't do it, we will, and pay postage.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, JULY 1, 1881.

For even Christ pleased not himself.—ROM. 15:3.

THE evidence this season in favor of starters completely filling the sections, is now very strong.

THE next meeting of the Cortland Union Bee-Keepers' Association, will be held at Cortland, N. Y., Tuesday, Aug. 6, 1881. C. M. Bean, Sec.

THE supply of wax sent in since our cover was printed, obliges us to reduce prices to 21c cash, or 23c trade. Please read these prices instead of those on the cover.

THE best advertisement you or any one else can have, is to send the goods just as you advertise them, or a little better, and the very minute the order reaches you.

NEIGHBOR H. and myself will visit D. M. Ferry's seed-gardens, in response to the invitation of friend Hunt (see page 289, June No.), on Saturday, the 16th of July, no preventing providence.

THE Revised New Testaments are just at hand, a whole thousand of them. Price 10c; if wanted by mail, 5c more for postage. For wholesale prices, see counter store. Give us an order, and see how quickly we can send you one.

THE *American Bee-Journal* has completed its first six months as a weekly, and has proved a success, as it could not well help being, with the able way in which it is gotten up—clean nice print, good paper, and brim full of "bee-talk" that could not all very well find place in a monthly.

WE have to-day, June 28th, 265 queen-rearing colonies, and are adding to the number by buying new swarms of blacks, hybrids, and Italians, at 50, 60, and 75c, per lb. respectively. If you think I am making too much money in selling them at $2.00 per lb., just take the trade out of my hands, please. In fact, I wish you would, for I want to go right to work now getting ready for winter, that I may fill orders more promptly next spring.

BEES TWO DOLLARS PER POUND.

IT is very bad to change prices, I know; and every time I have to do it I resolve I will not do it again if I can help it—I mean, a *raise* in prices. I do not know that anybody ever found fault when I put them down. Well, as you will see by our July price list, bees by the pound will be $2.00, or just double last year's prices, until further notice. Every thing else will be at old prices or lower. When bees get to be a drug in the market again, I will try to do better.

SHIPPING BEES BY THE POUND.

SOME of the friends have had very discouraging success in sending bees by the pound, but I think they are all doing better now. With abundance of ventilation, candy, and plenty of water, they go safely to Texas and California. We now put a water bottle in every section. It needs wire cloth, on every one of the six sides of the package, and the cage for a pound of bees, should be full as large as those we use.

WE have received from C. H. Lake, Baltimore, Md., a very fine specimen of workmanship in the shape of a wax-extractor. It will no doubt do its work well; but since our invention for rendering wax by steam, the job is so quickly done with any quantity, we hardly have occasion to even try any of the new inventions.

THIRTY queens were received at 7 o'clock in the evening. Neighbor H., John, Ernest, and myself, undertook to introduce them before dark. It was done by caging only three, and not one of the thirty was lost. The 27 were let right out on the top of the frames without a single one being attacked. Of course, every colony had been several days queenless.

Moral: About 27 times out of 30, during a yield of clover honey, you can let queens right out in any hive that has queen-cells well along. Many of them were laying next morning.

LABELS FOR HONEY, ETC.

SINCE there has been so much trouble about delays on labels, we have finally arranged to print them ourselves, and expect to be able to mail all orders within 48 hours after the day they are received. The work is in the hands of Mr. Gray's son George, one of the microscope boys. He will print you any kind of a gummed label, one color, for $1.00 per 1,000, providing it does not exceed in size 1x2 inches, nor contain over 50 words. Try him, and see how he "pans out" for promptness. If you "swamp" him with orders, a dozen boys and girls are ready to give him a lift. If wanted by mail, put in 5c per M. extra.

THE RUBBER FOUNDATION PLATES.

THE rubber plates for fdn. work beautifully in our hands, and Mr. Gray, with one hand to assist, makes and trims L. sheets at the rate of one a minute, on an average. These sheets are from 6 to 7 square ft. to the pound, and work in the hives beautifully. One strange thing about the rubber is, that you do not want cold water to immerse the plates in, but water tolerably warm. When every thing is right, the sheets will almost fall from the rubber dies of themselves. We have sold perhaps a dozen sets of plates; but I am sorry to say, as we go to press, only three of these purchasers have reported, and none of these favorably. In starting a new pair of plates, a little soap bark dissolved in the water in the tank seems to make the wax lift easier.

SENDING QUEENS WITHOUT MARKING THE CAGES.

IT would seem strange that any one should send us queens without saying a word as to whether they are blacks, hybrids, dollar, or tested queens; but we have received two lots to-day, in just that way. Do you suppose we are so wise that we can tell all about it by simply looking at them? I have been sorely tempted to say I would give you credit for all such at 15c each, and sell them to the first customer for 25; and if they are worth more, it would be his good fortune; but a small voice within says, "No, you won't, for you have promised to 'suffer long, and be kind.'" Please to be more thoughtful, dear friends, and do not thus block the wheels of the busy whirl here in our office and out in the apiary. We have got to introduce these, and risk the chances of identifying them when your answer comes.

WHILE at Neighbor H.'s I saw a comb so filled with brood that there was scarcely room for a drop of honey or a bit of pollen. Every cell was capped, and the beautifully regular brown embossing, clear up to the wood of the frame on all sides, was such a sight that I begged the comb and brought it home. It contains about 6,800 bees, and when they are hatched out will be worth, at retail, about $4.00. It was the work of a Holy-Land queen—one of those so long, slim, and dark, that she looks, as H. says, like a slate pencil. He thinks the sheet of fdn. had some thing to do with it. It was made on our thick-walled mill that we call Dunham, to distinguish it from the work of the other mill, with light walls. I never saw such a comb before, and I am inclined to think the Holy-Land bees do excel, in number of eggs laid, any thing we have had; but doubts are felt about their wintering as well as others.

HERBERT A. BURCH.

IN the May and June No's of GLEANINGS, friend Burch advertises—

> That we can write success upon our (apiarian) banner is indicated by the fact that even in this most disastrous winter, every colony of our large apiary is in fine condition.

Almost as soon as the above came out, a protest was made against it by his neighbors. I wrote him for an explanation; but, after some evasive replies, the following came to hand:—

> FRIEND NOVICE:—I have been so busy I could not possibly write before, and even now I must be very brief. Last September we had about 275 colonies of bees; these were reduced, by sale and uniting, to about 125 (can't give exact figures). The first week in April, 1881, these were all flying, and in good condition. Did not see them again until last of April (apiary five miles out, packed in chaff), when we found that about three-fourths had starved; hives were filled with bees; had sealed brood, and not an ounce of honey. We have not misstated a single thing in our adv's. They simply aimed to show that our bees were hardy. We suppose that almost any living thing would die if kept without food long enough. (We know bees will now.) We can show a good many letters that state that bees procured of us have lived this last winter, while all others have died.
>
> Now about orders: We are doing our utmost to fill them. Despite the earnest remonstrances of friends, I am working 18 to 20 hours every day, and can't well do more. If we had the bees we have bought and paid for, we could fill every order to-day. We intend, so far as lies in our power, to make every thing satisfactory with every customer. Sorry that you should think us fit candidates for "Humbugs and Swindles." If we wanted to swindle the people, we would have taken the thousands of dollars we have refused to take, and not have returned the hundreds of dollars we have. Even James Mohan wished us to receive more orders than we did. Now, my friend, do with us just as you think right. Whatever you wish to put in GLEANINGS will be all right, if you will give us space for a reply in the same issue. Should like very much to have written more, but can not now. H. A. BURCH.
>
> South Haven, Mich., June 3, 1881.

Of course, a great many orders were received by him for bees possessing such extraordinary qualities; and as his prices were also lower than others, as a general thing, quite a considerable sum of money was sent him, as I gather from complaints. Now, to fill orders with bees purchased *after* such an advertisement, of course would not be honest; but the worst of it is, he seems not to have done even this; and when he has been asked to return the money, he refuses—or, at least, fails to do this. I supposed he had been unfortunate, and have been trying to help him to pull through; but I am sorry that, for the present at least, I am compelled to say I can no more be responsible for Mr. Burch as I am for the rest of my advertisers. One of his customers, who had sent him over $200 for bees, finally made him a visit. The conductor of the train, at this friend's request, made examination of Mr. Burch's apiary, and the card below is his report:

> DEAR SIR:—Referring to the colonies of bees at Kibbies, there are only 9 left that show any life. Mr. B. is off through the country buying what he can, and perhaps will fill your order. That he has not got them of his own, I am assured. R. B. P.
>
> Kalamazoo, Mich., May 4, 1881.

Friend Burch doubtless can help the matter some by explanations; but the best explanation he can make is to return all the money sent him, at once, and to make a full, frank, public confession of his sin against God and his fellow-men, whatever it is. If he will do this, we will all help him, in every way in our power, to get on his feet again. Friend B., in the name of the Lord Jesus Christ, whom you profess to love and serve, I call upon you to confess your fault, make restitution as far as lies in your power, and stop blaming or speaking unkindly of those who have been so much your friends as to send you their money.

CITY MARKETS.

There is an entire absence of transactions of comb honey this month, there being no consumptive demand; dealers are awaiting the new crop. There has been a little speculative demand for extracted on account of the anticipated advance in prices, based upon the great losses in bees. Extracted, white clover, sold 14c. We look for bright opening of the markets on the receipt of new 1-lb. sections.

Beeswax inactive; prices nominally 20 to 25c.

Cleveland, O., June 21, 1881. A. C. KENDEL.

Honey and wax remain about the same as last quoted. The market is fully supplied, and there is a slight downward tendency in prices of honey.

Beeswax remains firm. ALFRED H. NEWMAN.

Chicago, Ill., June 21, 1881.

No change in the market of honey. Demand slow, and prices nominal.

Beeswax is quoted at 18@22c on arrival.

With an abundance of white clover, and apparently favorable weather, my bees did not collect hardly any honey last week. No honey coming in now. CHAS. F. MUTH.

Cincinnati, O , June 21, 1881.

TELEPHONES
For Private Lines. Ours excel all others for lines within their compass. Patented 1878 and 1881. *Latest, best.* Durable and reliable. ☞ Illustrated Circulars and Testimonials *free.*
7 HOLCOMBE & CO., Mallet Creek, O.

25 BLACK QUEENS for sale at 25 cts. each, postage paid.
7 JAMES A. GREEN, Dayton, Ill.

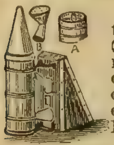
ITALIAN AND ALBINO QUEENS!
Untested queens, bred from Imported and Home-bred mothers, 90 cts.; per doz., $9.00, this month. Albino queens, untested, $1.00 each.
7 J. M. C. TAYLOR, Lewistown, Fred'k Co., Md.

Before Purchasing
any Italian or Cyprian bees, send for our 20th annual price list. Full colonies, Nuclei and Queens, at greatly reduced prices. Also headquarters for Apiarian supplies in New England.
WM. W. CARY & SON (formerly Wm. W. Cary),
3tfinq Colerain, Franklin Co., Mass.

At Kansas City, Mo.,
I breed pure *Italian* bees for sale. I warrant my "Dollar" queens to be mated by pure yellow drones, and guarantee safe arrival and perfect satisfaction.
Tested Queens, - - - - - - $2 00
"Dollar" " - - - - - - - 1 00
I will have no Cyprian queens for sale after July 15.
Bees, per lb., same prices as Dollar queens.
Please address all letters plainly to
6tfd E. M. HAYHURST, *P. O. Box* 1131.

THE
British Bee Journal.
The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at $1.00 per year, postage paid, beginning Jan. 1881. Will guarantee safe arrival of every No.
A. I. ROOT, Medina, Ohio.

Buy the Best



The best-informed bee-keepers in the U. S. say that our DOUBLE-DRAFT QUINBY SMOKER is decidedly the BEST now made. Hetherington discards all others, and orders two dozen for his own use. Doolittle says it is not equaled. So say all who see and *use it.* Price, by mail, $1.50 and $1.75.

OUR BOOK

QUINBY'S
NEW
BEE-KEEPING
BY MAIL
$1.50

QUINBY'S NEW BEE-KEEPING

continues to grow in popularity, and is the most practical work published. Price, by mail, $1.50.

We sell every thing used in advanced Bee Culture. Send for Illustrated Circular to

L. C. ROOT & BRO.,
7tfd **Mohawk, N. Y.**

---

150 STANDS OF BEES

FOR SALE!

As my health has failed, and I have decided to remove to Col. this fall, I offer my bees at a bargain. Almost all my frames are wired, and will stand shipping. I will sell by the colony, by the pound, by the nucleus, or any way to suit purchaser. Write what you want, and I will give you low prices and fine stocks. I have a large number of $1.00 queens on hand; can furnish a number of Presses before I remove to Col. Write for our late postal circular.

D. S. GIVEN,
7d Hoopeston, Vermillion Co., Ill.

BEES BY THE POUND!

July and August I will sell bees by the pound, delivered at express office; viz., 1 lb., $1.00; or with untested queen, $2.00; 2 lbs., and queen, $3.00; 3 lbs. and queen, $4.00; 5 lbs. and queen, $5.00. Holy-Land and Italian queens, bred from the best honey-gatherers. Cells mostly raised in natural way.

L. E. ST. JOHN,
7-8d Greene, Chenango Co., N. Y.

I SAY, Doolittle don't raise *cheap* queens, but he will send a tested Italian queen from his choicest stock, raised from cells produced by natural swarming, for $3.00 each. Two stocks gave, in 1877, 610 lbs. of box honey; one giving 309; the other 301; and our average for the last 9 years has been 86¾ lbs. per stock. If you wish queens from such stock, send in your orders to

G. M. DOOLITTLE,
Borodino, Onon. Co., N. Y.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Michigan,

Makes a *specialty* of rearing fine Italian queens. All queens bred from imported queens, and from the purest and best home-bred queens; and the cells built in full colonies. No black bees in the vicinity. Single queen, $1.00; six queens for $5.00; twelve or more, 75 cts. each. Tested queens, $2.00 each. Safe arrival by mail guaranteed. Send money by draft, registered letter, or by money order drawn on Flint, Mich. 6tfd

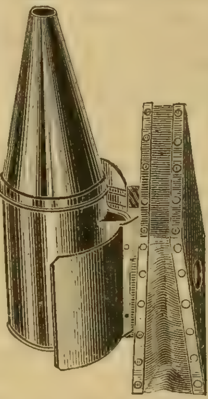
---

Sunny Side, Napa, Cal., June 10, 1881.

T. F. Bingham, Abronia, Mich.:—

DEAR SIR:—Please send me by mail two Large, six Extra, and four Standard Bingham smokers. Your four-years-old smoker is still in use, and does good service; the only trouble being, it is too small. I require the Large size. I have a Large and Small Quinby; Large one condemned; the other I got along with by repairing often. As far as I have tried them, I prefer yours above all, and shall keep them in stock. Yours truly, JAS. D. ENAS.

THE ORIGINAL DIRECT DRAFT!



Patented Jan. 9, 1878; May, 1879; Re-issued July 9, 1878. If you buy a Bingham Smoker, or a Bingham & Hetherington Honey-Knife, you are sure of the best and cheapest. The largest bee-keepers use them exclusively. Twenty thousand in use; not one ever returned, or letter of complaint received. Our original patent Smokers and Honey-Knives were the only ones on exhibition at the last National Bee-Keepers' Convention. Bingham Smokers, all but the Small, have fire and cinder proof bellows. The large and extra Standard Smokers have extra wide shields to prevent burnt fingers. These are the only real improvements made in bee-smokers since the Direct-Draft invention. Bingham is the inventor and only *legal* maker of them.

Bingham & Hetherington Honey-Knife, 2 in., -	$1 00
Large Bingham Smoker, 2½ in., - - -	1 50
Extra Standard Bingham Smoker, 2 inches, -	1 25
Plain Standard Bingham Smoker, 2 " -	1 00
Little Wonder Bingham Smoker, 1¾, " - -	75

If to be sent by mail, or singly by express, add 25 cents each, to prepay postage or express charges. Send card for testimonials. To sell again, apply for dozen or half-dozen rates. Address

BINGHAM & HETHERINGTON,
5tfd Abronia, Allegan Co., Mich.

ITALIAN QUEENS, NUCLEUS COLONIES.

I can furnish Bees and queens cheap. Send for special rates. Comb Foundation and every thing pertaining to the Apiary. A. D. BENHAM,
6tfd Olivet, Eaton Co., Mich.

BEES BY THE POUND!

I will, during July, sell bees for $1.00 per lb.; and if 5 lbs. are ordered in one coop, will put a queen with them gratis. My bees and queens are blacks, hybridized by using Italian drones. Queens, single; or with 1 lb. of bees, $1.00 each.

7d H. V. TRAIN, Mauston, Juneau Co., Wis.

Bees by the Pound!

During July, August, and September, I will sell boxes containing 5 lbs. of bees, and an untested Holy-Land, Cyprian, or Italian queen at $5.00. Orders filled in rotation. P. ELBERT NOSTRAND.
7 550 Bushwick Ave., Brooklyn, N. Y.

MONTHLY FAMILY VISITOR.

Full of excellent reading. Price 18 cts. a year. Sunday-schools are purchasing it for free distribution to families. Send 15 cts. in postage-stamps, and get a package of 15 papers on trial; *or more papers at same rate.* Address

7 B. F. SANFORD, Cincinnati, Ohio.

ONE-PIECE SECTIONS A SPECIALTY.

Pound and Prize size, $4.50 per 1000. Sample section free. BYRON WALKER,
7d Capac, St. Clair Co., Mich.

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FOR SALE.—The first eight volumes of the *American Bee Journal*. Four volumes, bound in paper, leather back. All in good order. Price $10.00.

V. LEONARD,
8 Springfield, Bradford Co., Pa.

ITALIAN QUEENS! I am prepared to furnish pure queens at a low price. Untested, in May, $1.00; June, 90c; after, 80c. Send for circular.

CHARLES D. DUVALL,
4-9d Spencerville, Mont. Co., Md.

FOR CANADA!

I will sell a few full colonies of bees, in 10-frame L. hives (Root's style), each to contain a young queen reared from daughters of my best and gentlest Italian queen of 1880, at $9.00 per colony.

A. G. WILLOWS,
8 Carlingford, Ontario, Can.

LUMBER WANTED!

I wish to exchange bees for pine lumber for a dwelling-house, shop, and other buildings, lumber to be delivered at some convenient point to ship by R. R. to Kalamazoo, Mich. Correspondence solicited.

O. H. TOWNSEND,
8d Hubbardstown, Mich.

CHAFF HIVES!

I can furnish Root Chaff Hives in flat for $1.50; nailed and painted, $2.50. Address

A. F. STAUFFER,
8 Sterling, Whiteside Co., Ill.

FIX UP STRONG

For winter during the month of August. I will sell 2 frames containing brood and honey and one pound of hybrid bees, delivered at express office in good condition, for $2.00. No queens for sale.

H. F. HAGEN,
8d DeSoto, Jefferson Co., Mo.

100 LBS. of bees for sale, $1.25 per lb. Queens $1.00. Tested, $2.00. Send for circular.

A. D. BENHAM,
8d Olivet, Eaton Co., Mich.

KIND READER! Do you want to buy queens? If so, give me a trial order. I am confident I can please you. **FINE WARRANTED ITALIAN QUEENS** a *specialty*. Prices: single queen, $1.00; per ½ doz., $5.50. All queens bred from choice imported and improved stock. Send for circular.

J. P. MOORE,
8tfd Box 27, Morgan, Pendleton Co., Ky.

FOR $5.00 I will send you 5 lbs. of Italian or hybrid bees, 5 worker combs, and 5 lbs. of honey, all in a second-hand Langstroth hive. Tested queen, bought of G. Grimm in May, $2.00 additional.

J. L. WOLFENDEN,
8d Adams, Wal. Co., Wis.

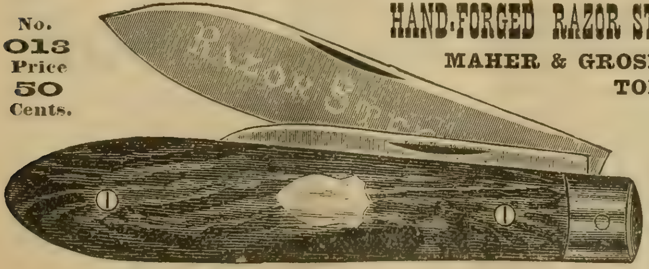
I OFFER for sale, this month, 100 3-frame nuclei with queens reared from mother whose progeny gave over 200 lbs. surplus in 1880. Price $3.00 for nuclei containing untested; $4.00 with tested queen.

F. L. WRIGHT,
8d Plainfield, Liv. Co., Mich.

100 SWARMS OF BEES FOR SALE, at $6.00. May be selected from over 200 swarms. This price includes 20-frame hive, 8 worker combs and contents, 2 chaff division-boards, one containing feeder, bees and queen. Bees are high-grade hybrids. I have about 70 young queens (not yet tested) from Doolittle's best stock. My frames are American, with open top-bar. Correspondence solicited.

F. B. CHAPMAN,
8 Scipioville, Cayuga Co., N.Y.

No.
013
Price
50
Cents.



HAND-FORGED RAZOR STEEL KNIFE FOR 50 CENTS!

MAHER & GROSH, 34 N. MONROE ST.,
TOLEDO, OHIO.

Hand-Forged Razor Steel Knife for 50 cents. Maher & Grosh, 34 N. Monroe St., Toledo, O., will mail Knife like cut, post-paid, for 50c. Extra heavy 2-blade for rough usage, 75c. *Our Best* 2-blade, oil temper and tested, $1. Pruner, oil temper, $1. Pruning Shears, $1. All goods exchanged free if soft or flawy.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Newark, Wirt Co., W. Va.	2-1
*A. I. Root, Medina, Ohio.	
*H. H. Brown, Light Street, Columbia Co., Pa.	7tf
*E. M. Hayhurst, Kansas City, Mo.	1-12
*Paul L. Viallon, Bayou Goula, La.	7tfd
*D. A. McCord, Oxford, Butler Co., O.	1-12
*S. F. Newman, Norwalk, Huron Co., O.	7tfd
*Chas. G. Dickinson, Sou' Oxford, Chen. Co. N. Y.	1-10
*Wm. Ballantine, Sago, Musk. Co., O.	7tfd
*W. H. Nesbit, Alpharetta, Milton Co., Ga.	7tfd
*J. O. Facey, New Hamburg, Ont., Can.	4-9
*H. Nicholas, Etters, York Co., Penn.	4-8
*John Conser, Glenn, Johnson Co., Kans.	4-9
*Fischer & Stehle, Marietta, Wash. Co., O.	4-9
*Jas. P. Sterritt, Sheakleyville, Mercer Co., Pa.	5-10
*Oliver Foster, Mt. Vernon, Linn Co., Iowa.	5tfd
*V. W. Keeney, Shirland, Win. Co., Ill.	6-9
*C. B. Curtis, Selma, Dallas Co., Ala.	6-11
*T. W. Dougherty, Mt. Vernon, Posey Co., Ind.	7-12
*L. E. Welch, Linden, Gen. Co., Mich.	6tfd
S. P. Roddy, Mechanistown, Fred. Co., Md.	7-8
*J. W. Keeran, Bloomington, McLean Co., Ill.	7-9
L. W. Vankirk, Box 178, Washington, Wash. Co. Pa.	7tfd.
*Otto Kleinow, opp. Ft. Wayne, Detroit, Mich.	8
C. H. Deane, Sr., Mortonsville, Woodford Co., Ky.	8tfd

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.	
P. L. Viallon, Bayou Goula, Iberville Par., La.	1tfd
S. F. Newman, Norwalk, Huron Co., O.	1tfd
J. F. Hart, Union Point, Greene Co., Ga.	4-3

Foundation Manufacturers.

Who agree to make such foundation, and at the prices given, as described in our circular.

A. I. Root, Medina, Ohio.
Jas. A. Nelson, Wyandott, Wyandott Co., Kans. 4-9

Bees by the Pound.

Those whose names appear below agree to furnish bees by the lb., and at the prices given in our circular.

I. L. Scofield, Chenango Bridge, Broome Co., N. Y.
S. C. Perry, Portland, Ionia Co., Mich.
J. P. Moore, Morgan, Pendleton Co., Ky.
W. R. Whitman, New Market, Madison Co., Ala.
Chas. Kingsley, Greeneville, Greene Co., Tenn.
C. D. Wright, Baxter Springs, Cherokee Co., Kans.
H. B. Harrington, Medina, Medina Co., O.
W. St. Martz, Moonshine, Clark Co., Ills.
G. W. Gates, Bartlett, Shelby Co., Tenn.
W. S. Canthen, Pleasant Hill, Lancaster Co., S. C.
J. G. Taylor, Austin, Travis Co., Texas.
T. P. Andrews, Farina, Fay. Co., Ill.
Allan D. Laughlin, Courtland, Law. Co., Ala.
E. J. Atchley, Lancaster, Dallas Co., Texas.
D. McKenzie, Carrollton P. O., N. O., La.
H. L. Griffith, Sumner, Law. Co., Ill.
J. H. Martin, Hartford, Wash. Co., N. Y.
W. A. Pirtle, Cabot, Lonoke Co., Ark.
E. T. Flanagan, Belleville, St. Clair Co., Ill.
J. K. Mayo, Stafford, Fort Bend Co., Texas.
J. F. Hart, Union Point, Greene Co., Ga.
B. Chase, Earlville, Madison Co., N. Y.
S. P. Roddy, Mechanicstown, Fred. Co., Md.
W. J. Ellison, Statesburg, Sumter Co., S. C.
R. A. Paschal, Geneva, Talbot Co., Ga.
Hall & Johnson, Kirby's Creek, Jackson Co., Ala.
A. Osbun, Spring Bluff, Adams Co., Wis.
H. D. Heath, Sherman, Grayson Co., Texas.
N. B. McKee, care of D. & D. Inst., Indianapolis, Ind.
J. B. R. Sherrick, Mt. Zion, Macon Co., Ill.
Otto Kleinow, opp. Fort Wayne, Detroit, Mich.
J. C. & D. H. Tweedy, Smithfield, Jeff. Co., O.

HEADQUARTERS IN THE SOUTH

For the Manufacture and Sale of

BEE-KEEPERS' SUPPLIES!

Italian Queens and Bees, all bred from mothers of my own importation. Dollar queens, $1.00. Tested queens, $2.50; 4-frame Nucleus, $5.00. Safe arrival and satisfaction guaranteed. Send for my illustrated catalogue.

PAUL L. VIALLON,
6tfd Bayou Goula, Iberville Par., La.

BEES FOR SALE CHEAP!

Also Supplies. Send for terms to
8 ENOS D. SMITH, Moira, Franklin Co., N. Y.

Bees by the Pound.

During the month of August I can ship bees promptly at the following rates: Blacks, 80c; Hybrids, 90c; Italians, $1.00. Safe arrival guaranteed.

J. A. GREEN,
8d Dayton, LaSalle Co., Ill.

BEES BY THE POUND!

July and August I will sell bees by the pound, delivered at express office; viz., 1 lb., $1.00; or with untested queen, $2.00; 2 lbs., and queen, $3.00; 3 lbs. and queen, $4.00; 5 lbs. and queen, $5.00. Holy-Land and Italian queens, bred from the best honey-gatherers. Cells mostly raised in natural way.

L. E. ST. JOHN,
7-8d Greene, Chenango Co., N. Y.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Michigan,

Makes a *specialty* of rearing fine Italian queens. All queens bred from imported queens, and from the purest and best home-bred queens; and the cells built in full colonies. No black bees in the vicinity. Single queen, $1.00; six queens for $5.00; twelve or more, 75 cts. each. Tested queens, $2 00 each. Safe arrival by mail guaranteed. Send money by draft, registered letter, or by money order drawn on Flint, Mich. 6tfd

☞He has a stock of queens on hand, and can fill orders *promptly*.

Bees by the Pound!

Having received an order for all the bees I have to spare in the fall, I shall be unable to fill any more orders at prices advertised last month. The above speaks well for my bees and queens.

QUEENS!

I shall continue to sell untested Cyprian, Holy-Land, and Italian Queens at $1.00 each. Tested, double price.

P. ELBERT NOSTRAND,
8d 550 Bushwick Ave., Brooklyn, N. Y.

HILL SIDE APIARY,
ITALIAN QUEENS!

Untested queens, $1.00; Tested, $2.00; Selected, $3.00; Pound of Bees, Italian, $1.00; 2 Langstroth-frame nuclei, $2.00; 3 Langstroth-frame nuclei, $3.00. For prices of Novice Extractors, Veils, Smokers, Hives, &c., &c., address
WM. B. COGGESHALL, SUPT.
8 Hill Side Apiary, Summit, Union Co., N. J.

MAKE BEES PAY

By getting the best Italian stock tested for "biz." *Good prolific* queens 75 cts. each; $7.80 per dozen; Tested, $1.50. USE MOLDED FDN. It *pays big*; 40 cts. for common; 50 cts. for thin. Improved fdn. mold, "L." size, Plaster, $3.75; Metallic (ready soon) $7.50. Root's rubber, $8.00. Outfit for same, $5.00. See free circular. OLIVER FOSTER,
7tfd Mt. Vernon, Linn Co., Iowa.

Italian (tested) Queens from Root's very best.

Imported or home-bred Queens, $2.00; Italian (untested) Queens, Laying, $1.00; Bees, $1.00 per lb.; 2 (L.) frame Nucleus (no queen) $1.50; 3 (L.) frame Nucleus (no queen), $2.00; 1 colony of Italian Bees (no queen) in 10 (L.) frame hives, $7.00. Add price of queen to price of bees, colony, and nucleus. Discount on larger orders. OTTO KLEINOW,
6tfd Opposite Fort Wayne, Detroit, Mich.

SEND for my circular and price list of Italian Colonies, Queens, and Apiarian Supplies.
5tfd H. H. BROWN, Light Street, Columbia Co., Pa.

C. OLM'S COMB FOUNDATION MACHINE.
SEND FOR SAMPLE AND CIRCULAR.
5tfd **C. OLM,** Fond du Lac, Wis.

J. M. BROOKS & BROS'.
AMERICAN ITALIANS.
PURITY OF STOCK A SPECIALTY.
4-9 CIRCULARS FREE.
COLUMBUS, - BARTH. CO., - INDIANA.

Full Colonies, Bees by the Pound, Nuclei, Fdn., &c.

I am prepared to fill orders for bees by the pound, nuclei (2 and 3 frame), full colonies of pure Italians. Also Cyprian Queens (Dadant's importation), and Italian Queens at A. I. Root's prices.
Given Fdn. a Specialty. Try it once, and see if you do not pronounce it the best you ever used.
E. T. FLANAGAN, Belleville, Box 819,
6-8d Rose Hill Apiary, St. Clair Co., Ill.

1881 ITALIAN QUEENS! 1881

Tested Queens........$1 50
Warranted Queens.. 1 00
Cyprian Queens, untested 1 00

As most all the Dollar queens I sold last year were pure, I will warrant them this year.
J. T. WILSON, Mortonsville,
8-9d Woodford Co., Ky.

KIND WORDS FROM OUR CUSTOMERS.

I find GLEANINGS an excellent advertising medium.
M. L. DORMAN.
Sinclairville, N. Y., July 21, 1881.

I received extractor just in time, and it works complete. I think we will have a first-class season for honey.
S. RICH, JR.
Hobart, N. Y., June 7, 1881.

Bees and smokers came all right. The queen filled 4 Langstroth frames in six days.
JOHN GILMORE.
Corunna, Mich., June 29, 1881.

Thanks, friend R., for that smoker. It is just "boss." We have had 26 natural swarms this month from 12 hives, averaging 5 lbs. each.
W. W. YOUNG.
Fort Dodge, Iowa, June 29, 1881.

The bees you sent came all right, and they are working like "little Turks," and from all present appearances, they will do well.
JONATHAN GOBLE.
Marion, White Co., Ind., June 29, 1881.

You will find postage stamps, am't 65 cts., for which you may please send me 1 more lb. fdn. The other lb. which you sent me I like very well indeed. I could not get along without it.
J. H. CUTSHAWL.
Greeneville, Greene Co., Tenn., June 23, 1881.

The queen-cages you sent came to hand *promp'ly.* If others filled orders as you do, there would be less grumbling. Those cages are a marvel of cheapness, with good quality combined. Certainly you give value for the money.
G. H. B. HOOPER.
Toronto, Canada, July 13, 1881.

Inclosed you will find 11 stamps to pay postage on the smoker you sent me. It came all right, loaded ready for the match. The boys had more fun with it than to have gone to a circus; and the bees, when they saucily come around, behave in a respectful way on being administered a little whiff of smoke in their faces.
WM. B. JONES.
Manchester, Del. Co., Iowa, July, 1881.

Extractor arrived in good order this P. M. Works splendid. Expect to make it hum to-morrow. Some hives are crammed full of bees and honey. I have more honey now than I got all last summer. Charges on extractor to Chicago, 80c; from Chicago, 50c. Cheap enough.
J. B. McCORMICK.
Neoga, Ills., June 13, 1881.

We received the goods ordered from you in due time, and in the very best condition. They were packed nicely. I put up and painted the hives, and with the assistance of my wife we transferred 12 colonies, which work, I think, was done very well, not having had any experience in that line. The bees are doing well now.
J. H. RODERICK.
Dodd's City, Fannin Co., Tex., April 23, 1881.

I beg to acknowledge, with many thanks, the receipt of your excellent book on bee-culture; it was a most agreeable surprise to me, as I understood it was but a mere paper-bound pamphlet, containing the most necessary elements of bee-farming, in place of the handsome and really interesting volume you sent me.
LOUIS M. HAYES.
Toronto, Can., July 11, 1881.

You sent me Christian's Secret a second time, and said, "No charge;" but I *will pay it.*
Corinth, Miss., June 22, 1881. N. F. STEELE.

[Well, I declare, friend S., it would be a "pretty tough job," if anybody should try to get up a quarrel between you and me. Do you not think so? It makes one feel as if it was not so very *risky* to "suffer long and be kind," after all.]

Imagine my pleasure and surprise the other day on going into the postoffice, to find GLEANINGS there to my address. "Well, now," says I, "that is some of Mary's work" (my wife, you know), a birthday present, and I tell you I appreciate it, especially that part called Our Homes. Three-fourths of the bees in this vicinity are dead. I saved six out of ten, packed in chaff on summer stands. They are now doing nicely. White clover is just commencing to bloom.
D. McLAFFERTY.
Great Valley, Catt. Co., N. Y., May 30, 1881.

The nucleus sent me came to hand yesterday at 4 P.M. in good condition. That same evening I put them in the hive I had prepared for them. To say that they are satisfactory, is not enough; they were *more* than *satisfactory.* Will you be so kind as to send another just like it, for inclosed? I was truly surprised to get the nucleus in such nice condition; and had I known they could be had so satisfactorily at an earlier date, I should have ordered 2 or 3 times the number.
L. O. SHULTZ.
Brazil, Ind., July 1, 1881.

I thought I did not need bee things enough this year to pay for sending away for them, so I bargained for some nearer home, and my husband, according to agreement, went eight miles after them today, and came home disgusted, not having found any hives, nor the maker at home, and he said, "Now you will have to send to Root and have all the things sent by express." Until this year I have always sent to you with neighbor Guild for articles, and have been delighted with them, because they were so nice.

MRS. C. A. GREELEY.

Chester, Windsor Co., Vt., June 22, 1881.

After another hard day's labor I am spending a little time reading GLEANINGS, and studying my Sunday-school lesson. They both open up a little world of pleasure to me. It seems that I never had so much to do—busy from 4 A.M. until 9 P.M., Sundays included. I have been appointed teacher in two Sabbath-schools. I walk nearly 12 miles every Sabbath, and enjoy it very much. We have organized a Sabbath-school about three miles distant, in a schoolhouse. We are having a very interesting school; have over fifty scholars—some who have not been to Sabbath-school for twenty years.

F. J. WARDELL.

Uhrichsville, Tusc. Co., O., June 3, 1881.

OUR HOUSEHOLD CONVENIENCES IN ITALY.

The cry in the house is, "We want more of them." More of them mean more of the same kind of needles you sent me in January. Please send me twenty papers, and three glass-cutters. I send you a post-office order for 66 cents; if it does not cover expense, I will remit balance when advised. There is a question that has arisen since I received the 5-cent nippers; that is, what are they good for? They are too soft to cut with, and too hard to draw with. Are they like Pindar's razors, made only to sell?

M. S. WICKERSHAM.

Ferrara, Italy, June 3, 1881.

[I am very glad to know you like the needles, friend W., and beg to assure you that we try to have all our goods just like them; viz., to use, rather than to sell. There seems to be much trouble with the friends all around in deciding what the 5-cent nippers are for; they look so much as if they would cut, almost everybody tries them on some thing hard, and snap go the jaws, for five cents is not enough to pay for making a pair of cutting-pliers. They are to "nip" hold of things you could not reach and hold with the fingers alone, always remembering they are a five-cent tool. Thanks for reporting from so far away, friend W.]

Inclosed please find $1.75, for which please send me a smoker, the best in the market—a large one, and one that I will not have to light every half-hour. I am standing in the door waiting for it, standing first on one leg and then on the other. One year ago I got Benny Judson, of Salt Lake City, to send to you for the A B C book. I confess I like the book, and am taking GLEANINGS. There is one thing I learned there in the A B C book worth more to me than many times the price of the book; that is, I read on page 275 how you learned chaff packing of J. H. Townley.

I had experience previous to this in bee-keeping, but would have given it up if I had not got some such idea from some source. I thank you again for your works on bees; and those metal-corners and metal rabbets! how nicely they work!

WM. C. BILLS.

South Jordan, Utah, June 4, 1881.

[Many thanks for kind words, friend B.; but really, if I were you I would stand squarely on both feet and go out and work with the bees, or do some thing else useful until the smoker comes. I know how it is myself; for when I want a thing *I want it;* but I have always found it most profitable to get right to work and do some thing meanwhile.]

THE FARIS PLATES, ETC.

I received your wrapper on GLEANINGS, notifying me that my subscription was run out, and that if I thought it a good investment, to renew. Well, I think it is a good investment, and on looking over the past year I think there is not any thing in reading matter, that has paid me so well as GLEANINGS. In the first place, it was worth all the price to find out how to make those plaster plates of friend Faris'. I made a pair, and have made all the foundation I shall need this season, besides selling quite a lot. Then there were Doolittle's articles, well worth the subscription, especially those two on page 320, July No., 1880, about the care of empty combs, and the other, on page 232, May, 1881, on side and top storing, is a splendid article, which I know from this season's experience; and I could name a lot of other good articles from different writers, which are fine. Then there is the pleasure of having not only a smile, but a good hearty laugh every month at Merrybanks, "old Zac," and such like. Then there is the Home reading, which is worth double the price of GLEANINGS; and may God bless you in trying to do good in this way. Well, I think GLEANINGS is a good investment, and inclosed you will find the money for another year's subscription, and also one year's subscription for a friend. My bees are doing very well so far this season. I had three colonies to start with—two very weak, and one very strong. One has swarmed, and the other two are about to. We have had a steady yield of honey from white clover for the last two weeks; but it has been too cold nights to be a heavy yield, but we can't complain so far.

JOHN MYERS.

Stratford, Ont., Can., June 27, 1881.

KIND WORDS TO OUR CUSTOMERS.

Of late there seem to be a good many complaints that goods are not in the packages, even when they were put in all right, and overlooked by the person who unpacks them. Now, about opening goods: Do not trust to anybody else; but, bill in hand, open and take out the goods yourself. Do not unpack them among a lot of other stuff, or where any thing might get out of sight and be lost. Also be sure you have the full number of packages from the R. R. or express company that your bill calls for. The following illustrates the point:—

I wrote you a few days ago, stating the bottoms and ½ ends of the broad section frames were wanting. I now find that my man misplaced them, and forgot all about it. It seems they were put in a small box by themselves, and he set them in an out-of-the-way place. I regret very much the mistake, and will do whatever is right in the matter. If you have shipped the parts, please send me your bill, and I will remit; and if you have been to any trouble put that in.

W. W. REYNOLDS.

Penn, Cass Co., Mich., June 16, 1881.

Our friend apologizes and offers to recompense us in a manly way, and we can not think of taking any thing for trouble; but it took quite a search among the clerks before we could write him that the goods were all sent him correctly. Of course, we sent them on again, which makes him trouble and expense. Another friend wrote us his spring balance was missing, for he had looked the goods all over, but next mail he said he found it safely tied in his extractor. So many cases of this kind are turning up, I have thought best to tell you to look very carefully, before asking us to replace what is missing, for I assure you our clerks are more careful here than you, the average of humanity, who have not had the drill and discipline they have.

OUR $175.00 STEAM-ENGINE.

One of our customers asks a number of questions which may interest many of our readers in regard to the small engines we sell. As Mr. Washburn runs his machine shop with one of them, we have asked him to answer the questions.

How much water to fill boiler when empty?—Can start on five pails to fill.

Has it a glass water-gauge?—Yes.

Has it three gauge-cocks?—Only two.

Has it a steam-whistle?—None.

Is its cylinder convenient to get at for packing?—Yes; cylinder is easily got at.

How thick is the plate in boiler?—Do not know; it is cast-iron, tested to 300 lbs.

How many pipes in boiler?—None.

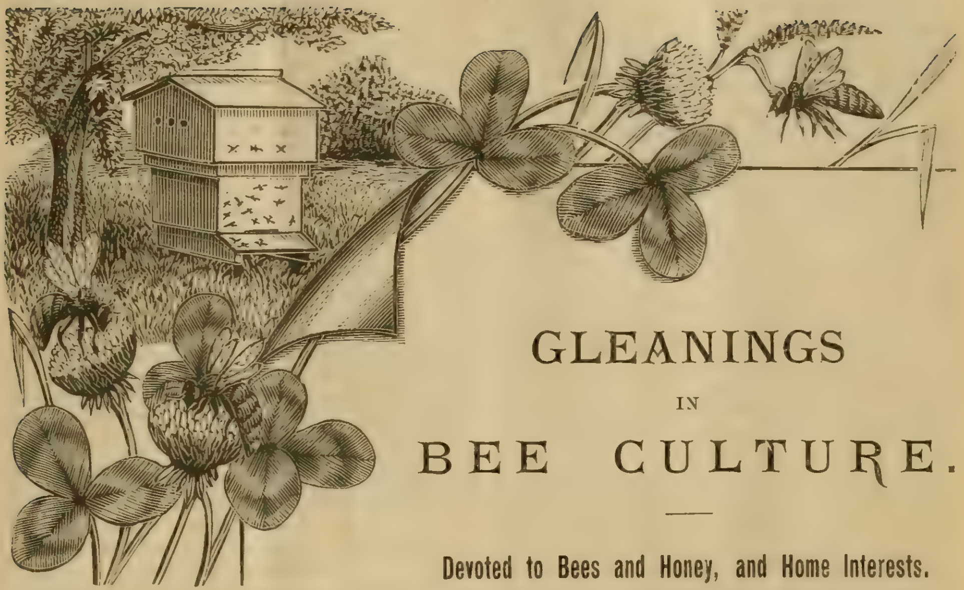
How many pounds of steam to run scroll saw?—Not many, perhaps 20 lbs.

Is it simple, and easy to operate?—Yes.

In short, is it an engine to be depended on for scroll saw and wood lathe?—Yes; I can run 6½ feet iron planer, 2 iron lathes, upright drill, and grindstone, all at once. I carry steam from 40 to 100 lbs. Use 80 to 90 lbs. coal, and 60 to 70 gallons of water per day; it has automatic cut-off, and is a good little machine.

A. WASHBURN.

Medina, O., July 1, 1881.



GLEANINGS
IN
BEE CULTURE.

Devoted to Bees and Honey, and Home Interests.

Vol. IX. AUG. 1, 1881. No. 8.

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.
Established in 1873.

TERMS. $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POST-OFFICE. Clubs to different postoffices, NOT LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

No. 21.

JULY 1. I have never seen the basswood-trees so loaded with buds as they are now.

July 6.—Basswood is in blossom, and the trees are just one mass of yellow bloom. When I pass that large basswood in going to the "spring" after a pail of water, I notice that the air is fairly laden with sweetness. I presume an orange grove would smell no sweeter. It is very easy to see that the bees are gathering honey very rapidly, because they go into their hives with that "swish" and "wiggle" that always shows that they are "scooping" in the honey. What a humming the bees do make! Several times to-day I have gone to the door to see if they were not swarming. They are so eager to gather their harvest, that they are loth to stop, even after dark; and at the first dawn of the morning those that stayed in the tree-tops all night come home with their loads. (I guess that is the way it is.)

July 16.—And the basswood harvest is almost over. I have extracted about 300 lbs. from my 18 colonies, and their upper stories are full again, ready to extract when I get around to it. Yes, and four of them are three stories high. Oh, yes! and then there are the 70 nuclei, and a good many of them are "chock" full. There are about 50 acres of buckwheat sown within two miles of here. Some of it is already beginning to blossom; so you see I shall have a good time rearing queens the remainder of the season.

To-day is the day when friend Root and other bee-keeping friends are having such a good time in Detroit. How I *did* wish that I could go; but I have no clerks nor boys to leave in charge of my queen-rearing business, and it would suffer if I left it; besides, I might better take the money that it would cost me to go, and use it to help pay my debts. Never mind, friend Root; when the time comes right, I am coming to see you. I dreamed, the other night, that *you* came to see me.

AN HONEST BEE-KEEPER.

Last May I sent $75.00 to friend Townsend, of Hubbardston, Ionia Co., Mich., for 7 colonies of pure Italians. I thought the price pretty high; but when the bees came I was satisfied. They came the first week in June, and the hives were full of bees, each hive containing 12 combs with brood in 8 combs. If friend T. does as well by every one as he did by me, he deserves to be patronized.

THIEVES CAUGHT.

A year ago last August I had two hives of bees stolen, and last spring *one* of the thieves was brought to justice. He was fined $10.00 and costs; all of which amounted to about $60.00. At the time the bees were stolen he could have bought 600 lbs. of honey for $60.00. Rather expensive honey, considering that, as the thief remarked, they "didn't get more than a teacupful of honey." They were hives containing queen-rearing nuclei.

BEE-KEEPERS, WRITE FOR YOUR PAPER.

An old gentleman living near here, one who doesn't believe in "book farming," says: "The ones that know the least about farming are the ones that write the most for the agricultural papers." Now, while I do not *entirely* agree with this old gentleman, I *do* think that there are many bee-keepers who might do much good by writing for the bee-papers, and yet they seldom or never write. There is a bee-keeper living a few miles from here, of whom I always obtain valuable hints and suggestions each time I meet him, and yet he seldom writes for the bee-papers. Seems to me I hear some one say, "I don't have the time." Let me tell my experience. I presume some of you remember the "Scraps and Sketches" that I wrote a year or two ago for GLEANINGS; but I don't believe any of you can tell why the articles were called "Scraps and Sketches." The first winter after our little twins came to brighten our pathway, they were certainly "troublesome comforts;" many and many a night we would not get more than an hour's sleep, while during the day we could just manage to do the "housework" and the "chores." I could not leave home to work, neither could we afford to keep a "girl," and my time was so occupied, and I felt so "tired out," that it did seem as though I should be obliged to give up writing for GLEANINGS; but finally I placed a paper and pencil upon my desk, and whenever I had—yes, just *one* minute, I stepped to the desk and wrote. Many and many a paragraph have I composed with a baby on each knee; and as soon as an opportunity presented itself I would step to the desk and write it down in phonography. What else could my writings be but "Scraps and Sketches"? When an article was finished, it was written out in long hand in scraps.

Don't say that you haven't time, because you can find time if you only try hard enough. Don't write *theory*, but give *facts*, and *useful information*.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

Friend H., I have just this minute returned from almost a week's absence in your State, and the pleasant visits I have had have determined me to visit more of you. I can think of no place I would rather visit just now than your little home.

TOO MUCH SMOKE.

WHY not caution the A B C class often about using too much smoke in handling their bees? I know you have done it heretofore, but I believe it ought to be repeated often. When we throw away fear entirely, I think smoke is of little or no use. I believe we can handle bees the year round, and do it with more satisfaction and better results by leaving smoke entirely out of the apiary. If instead of going to a hive, jerking the cap off, tearing off the quilt, and blowing in smoke to arouse the colony to a fighting pitch, we would be cautious, raising the cap easily (a cap that will not come off without jarring the hive has no business in the apiary), raise the quilt slowly, without jarring, avoiding all quick motions, laying the quilt to one side, and then pick up the frame, or, rather, commence picking it up, draw it out slowly, I tell you, sir, you will have no trouble, even with black bees running over their combs scared to death. If they fly in your face and alight on your hands, not one in twenty will sting you if you just pay no attention to them. I have discarded smoke almost entirely.

A. H. DUFF.

Flat Ridge, Ohio, June 10, 1881.

There is much truth in your remarks, friend D., and I have often thought, as I saw somebody dose with smoke a colony that had not the least disposition to be cross, that it was an act of sheer cruelty. Sometimes a very little smoke will answer all purposes, where honey is not coming enough to keep them peaceable. Another thing: Where robbers are bad, smoke is the very worst thing; for where bees would promptly repel robbers, and keep them entirely out of the hive, if let alone, I have seen the boys smoke down the inmates so they could not prevent the robbers from pushing right down and getting their fill, almost before they could get back to defend their rightful stores. I have, too, seen smoke used at the entrance to drive robbers away. If you want your bees to defend their hive, and take care of thieves, by no means think of smoking them. I believe, however, friend D., I should like a lighted smoker near, to use if needed. Sometimes it greatly facilitates getting the bees out of the way in opening or closing the hive, and thereby enables us to work faster. It is no strange thing to find bees you can handle at certain times without smoke, when you could not with.

ARTIFICIAL AND NATURAL SWARMING QUEENS, ETC.

ON page 277 of the June No., I notice an article on queen-rearing, by E. Gallup. I wish to briefly notice a few points in said article. In the first place, he says that no one will deny that some queens are far ahead of others in prolificness. Among what class of queens do we find such? My artificial queens, as a rule, generally outstrip the natural ones. As good queens as I have in my apiary were reared from brood received from A. I. Root. As to size and appearance, no one can tell the difference. I would not go to much extra trouble to save natural cells. Colonies that are not disturbed, frequently have queens that are just the same as those reared artificially, and a colony that swarms naturally frequently starts cells after the swarm has left. Now, if we save all these cells, we get some that are not natural. It is very easy to get natural cells at any season of the year by putting an old queen in a small nuclei, and feed liberally, supplying cells from time to time as they are found in colonies just before the egg is deposited in them. Such cells can easily be found in new swarms. I never succeeded in getting the bees of the nuclei to build many such cells; but if a dozen were inserted, an egg would be found in each shortly after. Such queens are as good, but no better, than those reared artificially. I agree with Mr. G., that we should change our stock often, but we should be careful from whom we obtain our stock, as some breeders of queens are getting careless. A great many are rearing queens from those that "winter well," or are "good honey-gatherers," without regard to purity. W. Z. Hutchinson said that if he were not rearing queens for sale, he would breed from a black queen, just because her colony happened to winter well! I sold a queen for 50 cents a few days ago (the mother of as good a colony as I have), just because she was not quite pure. I would be afraid to breed from such, as the "bad blood" might crop out in future generations, as it does in breeding other stock. Any one ought to be satisfied with the Italian bee; and while we breed for desirable qualities, we should not lose sight of purity. I am satisfied that the good qualities found in the blacks and hybrids are also found in the Italians.

L. W. VANKIRK.

Washington, Pa., June 10, 1881.

HOW AN A B C SCHOLAR MANAGES.

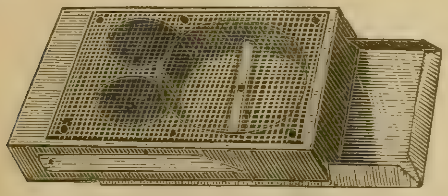
I WAS just thinking, friend R., I would like to "toot my horn," as I see many of the A B C class are doing. On the 20th of March, 1880, I purchased a colony, brought them home, drove 4 stakes in the ground, leaving them about 2 feet high; set up the hive, thinking I might shortly be a bee-keeper. They never swarmed last summer; at least, I never saw them. I watched them closely—the bees hanging in clusters outside of the hive nearly all summer. The entrance was ¾ of an inch by 3 inches long. To make things better, a colt got in in early winter, and over went the hive, loosening many of the combs. I left them there all winter without protection, and they came out all right. Receiving from a friend one of your circulars of January, I purchased A B C, made a couple of Simplicities, and a smoker, as per directions. On the 22d of April I transferred, using little smoke; got along well. Care assures success. The fun was, I could not find the queen, and was afraid I had a fertile worker inside. So I sent to one of your advertising patrons on the 30th, and on the 12th of May she came safely to hand. I went to take the last look for the black queen, when, right before my eyes, there she was. I did not like to kill her, so I took out two frames of sealed brood, and what bees were on, and started a nuclei. They have a nice lot of sealed brood now, which will hatch out in three or four days. In introducing I took the Italian, and drew open the door. She passed out on the comb, which I was holding in my hand, and my smoker in the other. They were soon in the act of taking her to parts unknown, when I gave them a little smoke, when they let go. I did so a couple of times, when they let her pass as an old friend.

WILL ELLIS.

St. David's, Ont., Can., June 3, 1881.

FURTHER IMPROVEMENTS IN THE PEET CAGE.

EVEN a very little improvement is quite an item, in an article used in the apiary as much as queen-cages are now; and although the cage below differs but little from the one we pictured recently, it has features that make it worth while to be illustrated again. The first of these is the groove for holding the tin slide.

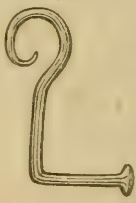


LATEST IMPROVED PEET CAGE.

Instead of making the groove near the corner, and slanting outward, we now make them as you see, right on the corner, slanting in toward the center of the block. The tin slide is simply folded over to an acute instead of obtuse angle. This improvement was made by two friends at just about the same time, for both cages came in the same mail. One cage was from our old friend Oliver Foster, and the other I have had the misfortune to mislay. The other feature is the little tin water-bottle which you see. A description of this will also be found on page 397. These little bottles are made by rolling tagger's tin on a steel rod, say about the size of a round lead-pencil, and putting a cap on each end. The size should be just as large as it can be and still let a bee pass over it freely without getting fast between it and the wire cloth. Although this water-bottle is needed only for long distances, queens are much safer with it, and they seem to stand the trip looking much better. The bottle is long enough to just squeeze in across the cage. The orifice is made with the point of an awl. To be sure your bottles do not leak, just put one to your mouth, and, after sucking the air out, see if it will stick to your tongue. We can not have any leaky bottles when shipping queens. We can not, at present, make these bottles for less than $2.00 per hundred. I wish some one else would make them cheaper. Where are our amateur tinners? The bottles are filled with an oil-can, as I have before explained.

WINDING THE WATERBURY WATCH.

HERE is the way I make a "windlass" for winding the Waterbury watch: Take a small piece of wire, and bend it as I have marked.



The end at the point catches in one of the grooves on the stem, and keeps the wire from slipping.

A. T. McILWAIN.

Abbeville C. H., S. C., July 6, '81.

Many thanks, friend M.; as soon as I saw your idea, I went down into the counter store, and taking a blanket pin from the 5-cent counter, with a pair of the round-nose plyers I soon bent it into the shape of the accompanying cut, and the girls who wind the watches every morning were very much delighted with them. We have sent a sample to the factory, and perhaps they will improve on it still more. They might easily be made for a penny each.

GRAPE SUGAR.

I HAVE washed a piece of the crystal grape sugar, exactly as Mrs. Harrison has requested me to do, in another column, and I find no residue whatever. The sugar dissolves as perfectly as a piece of rock candy. I presume I am perfectly acquainted with what she alludes to. In feeding grape sugar from the Davenport factory, in a glass jar on a grooved board, as I have so many times described to you, we invariably find a green scum on the surface of the water. This scum has an offensive look, but I have always supposed it was a vegetable scum, like that from sorghum. The Buffalo A sugar shows a very little of this scum, but the crystal sugar that I commended so strongly has no residue, and no taste but that of pure sugar, so far as I can discover. As I can not think that Mrs. H. has ever seen any of the genuine, I have sent her a lump.

HONEY-DEW FROM THE CLOUDS.

ANOTHER STATEMENT OF ITS FALLING FROM THE AIR IN A MIST.

A FRIEND sends the following, clipped from a newspaper. As the town is not given, we have no means of knowing whether we have subscribers in that county or not; but if we have, or if anybody else whose eye meets this, can put us in communication with this John Kee, we will consider it a great favor :—

HONEY-DEW IN GEORGIA.

Mr. John Kee, of Talbot county, is responsible for the following: "It was early Sunday morning. My daughter was engaged in sweeping off the front porch, when her attention was attracted by the plaintive cries of young chickens and the distressed clucking of a hen. The sound came from a pile of leaves under some poplar-trees in the yard, and hurrying to the spot, she found the little chicks all stuck up with leaves, rolling about trying to free themselves, and two of the little sufferers were stuck together. She picked these two up, and, coming to the house, called me. On examination we found them covered with a sticky substance, which seemed to have come off the leaves, and, tasting, I was surprised to find it honey. On looking around, I could see it glistening in the sunshine like diamonds on every leaflet, and on the porch for two or three feet were splotches of it. Several neighbors dropped in during the day whom I told of the honey shower, supposing it had been general, but they were incredulous until shown evidences of it. In the evening of the same day I noticed a mist between me and the sun, and a closer examination disclosed the fact that we were having a repetition of the phenomenon, which was witnessed by a dozen people. While it did not run off the house either morning or evening, it covered the leaves of the trees and shrubs, and was, without doubt, honey-dew, and that, too, from a cloudless sky."—*Col. Times.*

The above, it will be noticed, is given by those who seem to have no interest in bees; and, although startling, it seems to have about it an air of truthfulness. I would almost make a visit to Georgia to have an opportunity of witnessing such a sight.

HOLY-LAND BEES; CANDY FOR QUEEN-CAGES, ETC.

I HAVE shipped queens all over the United States and Canada this summer, and all I have lost were two that were sent in your old bottle cages. I use granulated sugar, with honey enough added to make it stick together, for feed; how do you like it? I think you are mistaken when you say the Holy-Land bees are not as hardy as the Italians, or that you do not think they will winter as well. My experience last winter with them tells me that they stand the winter much the better. Last fall I had about 100 colonies of Italians, and about 60 Holy-Lands and 27 blacks; out of the Italians I saved about 10 very weak colonies, and out of the Holy-Lands I had some 40 odd left, about 15 in splendid condition; the remainder weak, and not a black colony survived the winter. The blacks, I bought and got for nothing late in the fall.

There are a few things about the Holy-Land bees I do not like. They are crosser than the Italians, and will not stick to their comb in handling like the Italians, and the queens are more timid, and not as easily found as the Italians; but then, there are other points I like about them. They will go to work earlier in surplus boxes, and with less bees in the hive, than the Italians; the queens are very prolific; are proof against moth worms and robbers; they will not attack a person to sting, as long as left alone. Please do not condemn any thing without a thorough trial. "Prove all things, hold fast that which is good."

Tell neighbor H. he had better luck with his lighted smoker in the buggy than A. P. Blosser, who had his entire buggy-box, with a fifty-dollar harness, burned by leaving his smoker with fire in it in the buggy over night. J. R. GOOD.

Nappanee, Elkhart Co., Ind., July 11, 1881.

The queen and bees came through on the granulated sugar, wet up with honey, in splendid trim. The mixture is put into an auger-hole, adjoining the cage, with only a small passage through the wood into the candy. The bees crawl in and get the food, and then crawl back again. I think there is but little question now, but that sugar is safer food than honey alone; but it is quite likely that both the sugar and honey are what we want. Friend S. D. McLean, of Culleoka, Tenn., has just sent us a lot of queens, one half of which were put up with candy and water, and the other half with honey. He asked us to report which were received in better order, as he wanted to know which kind of food is the safer. Those with water and sugar were in decidedly the better order; and as they came Saturday night, we had to keep them over Sunday. Monday morning the bees in the cages with honey only were nearly all dead, while the others seemed as fresh as when they first came. In wintering we have about the same result. Granulated sugar is very much better for winter stores than the various kinds of honey (especially fall honey) that are collected here and there.

ONE MORNING'S WORK.

I CAN not resist the temptation to report what I have just done. After breakfast, at 6:30 o'clock, I pounded some sugar corn, and fed my German carp; gathered an armful of the best smoker wood; lighted my smoker, and opened a chaff hive, and took out 10 frames of sections, 72 ready for market, the other 8 about half filled. I did not kill a bee nor get stung. I will give you my reasons why I think this was so quickly and well done.

1. The upper and lower frames come close together; over the lower frames I put a piece of cotton cloth, eaten full of holes by the bees; the holes give free access to the brood frames, which are so close that there are no ladders or bridges built.

2. The wide frames, bees, etc., are, as fast as taken out, set in an empty lower story; 5 are put in this, then an upper story is placed on the first, and the other 5 frames put in it and covered with a cloth. The bees in the hive were then given a feeder, full of sugar and water, in place of the wide frames, and the cover put on next. Began smoking the wide frames by turning up one edge of the cloth; as soon as a frame was clear of bees it was carried to honey-room; in a few minutes all the frames were sitting on my honey-table. I carried in 10 bees, and had to scrape wax from only one bottom-piece. I did not spill one drop of honey. After attending other things, and writing this, it is 8:30 A. M.

Pewee Valley, Ky., July 25, 1881. A. W. KAYE.

RAMBLE NO. 6.

TO the N. W. from our apiary is located the historical town of Fort Ann. Bee-keeping in this town is, or was, some thing of an industry. Several hundred swarms were kept, two parties owning each over two hundred colonies. The main supply of honey in this region is willow, of which an abundant supply is found along the streams. White clover, chestnut, and basswood are abundant, while the mountain-sides that have been recently cleared are covered with raspberries, and a species of aster. Some buckwheat is sown for fall pasturage.

The past winter made sad havoc among the hundreds of colonies of this town. Mr. Keech, owning over 200 colonies, built a new bee-house for wintering. The hives were packed in quite closely, and all in the center were smothered from the effects of a scant supply of ventilation. Many more died upon being placed upon their summer stands. So this man's apiary was reduced nearly one-half by the first of May. Mr. Keech will have nothing to do with movable-comb hives and modern fixtures. His honey is secured in large rough boxes, and is sold at a price in keeping with the style of package.

Mr. Adams, in another portion of the town, had a fine apiary of over 200 colonies in Langstroth hives. He has usually had excellent success in wintering in his cellar, but last winter they were left upon their summer stands, and this spring twenty swarms are all that are left. Mr. A. thinks he has bees enough now. In relating his experience with bees, Mr. A. gave me an illustration of what to do with burglars or night thieves after honey. I was reminded of your question in a past number of GLEANINGS. Mr. A.'s plan was very effective. Finding his bees tampered with, he armed himself with a rifle, stationed himself behind a fence, and sat down for a night vigil. About midnight two shadowy forms were seen moving toward a bee-hive. Mr. A. took aim as best he could in the dark, and fired. No dead bodies were found upon the battlefield, but some time afterward he learned that the ball took effect in the young man's coat, between his arm and body. It was such a close call that his apiary has not been molested since.

Bee-hunting is some thing of a business on these mountains in the fall. Many swarms are found in all sorts of locations. Conversing with a bee-keeper in relation to these absconding swarms, he told me of his method of prevention, and how to prevent swarms from settling together. In answer to my question as to how he prevented it, "Why," said he, "all you have to do is to hang them in the cellar." If a swarm seems inclined to abscond by coming out of their hive a second time and alighting, the limb, bees, and all, were hung in the dark cellar; if a swarm had nearly settled, and another was seen issuing, the limb was severed, and the swarm hung in the cellar until he had time to hive them. Three or four swarms were thus hanging quietly, waiting for their turn to be hived. Swarms that had tried to abscond were left hanging in the cellar two days. His theory was, that by that time they were getting hungry, and would work in any kind of a receptacle. "Why," said he, "you ought to see them get up and dust for honey when put in a hive."

I found another bee-keeper who didn't care any thing about his bees; didn't care whether they lived or died; hived them in any thing handy, and has good success in *keeping* them; winters well upon their summer stands, and when they swarm they hang on the tree until he comes home to dinner. At least, that is about all he hives; if there are any that don't wait for him he is none the wiser for it. Still, he has over 60 colonies.

Another friend we found had eleven colonies in the fall. They were elevated two feet from the ground, in a very exposed position. The front entrances were 2 inches by 12. The holes in the top surplus boxes were all open, and a rough flimsy cover with a heavy stone on the top, completed the hive. Still, those bees wintered with the loss of but one colony. The rest were strong, with drones flying on May 8th. This was another don't-care bee-keeper. And with him we will close our ramble.

Hartford, N. Y. J. H. MARTIN.

Many thanks for your array of facts, friend M.; but I want to protest a little against your way of treating burglars. The law does not sanction the taking of life for stealing honey, if I am correct; and had our friend killed his man, I hardly think he would have felt happy over it, even had the law made no interference. Let him now go to this young man and have a good plain talk with him. It is ignorance, or one species of ignorance, that prompts acts like these. If we can succeed in saving his soul, instead of killing his body, while he is in an act of sin, will it not be better? I by no means believe in letting such fellows off, mind you; but I think the regular course of law better than bullets.

HOW TO REAR GOOD QUEENS.

I ONCE said, in the North-Eastern Bee-Keepers' Convention, that everything pertaining to profitable bee-keeping centered in the queen; for the queen is the mainspring of the colony as surely as the mainspring of the watch is the power that makes all else in the watch of use. If this is so, it is very easy to see that, if the mainspring is poor, the whole that has this for a center will be poor also. Hence, the necessity of rearing good queens becomes apparent to every one who is looking toward success in apiculture. Probably all will admit that no better queens can be obtained than those reared under the impulse which returns to the bees with each successive spring to perpetuate their species through natural swarming; and if all cells could be built by the bees while under this impulse, good queens, as a rule, would be the result. Well, why not rear them thus? Chiefly because of the extra trouble and care it takes to accommodate ourselves to the impulse of the bees; or, in other words, to have the bees themselves conform to our wishes. So far this season I have reared all my queens except one by natural swarming, having reared over 200, and I will tell you how I did it. The fore part of May I began giving my best stocks brood from other colonies, taking the brood each time from the same colony as they could spare it and not reduce them too much. May 25th queen-cells were started, when I ceased to give them more brood, not changing brood any more after that. Soon we had a fine lot of cells sealed, and swarms issuing along at intervals as we wished to use the cells. As I had but two or three queens I wished to breed from, of course the colonies containing these queens could not be kept swarming all the time; so I adopted the transposition process, and soon found that I could get all swarms that were strong enough to have cups for queen-cells started, to swarm almost when I wished to have them, and rear all their queens from my best stock. Thus those made strong swarmed first, the medium next, and those made weak by taking away brood last, furnishing me with a succession of natural cells for nearly two months, and I do not see why I can not keep it up till September if I wish; for if pasturage fails, the lack can be supplied by feeding. At first I looked over the stock, and all I found having eggs in the queen-cells I marked; and when the eggs had been hatched, and royal jelly was plenty in the cells, I took out their larvæ and put in one just hatched from my best queen. To do this I shaved the piece of comb taken from my best stock down near the base of the cells, when the small larvæ just hatched could readily be seen. Now, with a toothpick made of a goose quill, having the point bent into a hooked shape while soaked and then dried, so it should not straighten out, I could lift these little larvæ from their cradles and set them floating in the royal jelly, from which, in due time, they emerged royal princesses of the right lineage. Next I thought trying taking those eggs out of the cells and transferring my intended royal larvæ directly into them. The bare cells, devoid of all royal jelly, looked rather unpropitious, and I doubted the propriety of placing the tiny infants in such a hard cradle without even a blanket beneath them; but an examination an hour or two afterward showed them plentifully supplied with the necessary royal jelly. If they were well cared for in this case, why not transfer them into the queen-cups before the eggs were laid? was my next thought. To think was to act, and I soon had 17 little larvæ snugly ensconced in 17 queen-cup cradles. An examination showed, however, that only about half of them were fed, while the others were removed. Next I took 24 old queen-cells from which the queens had hatched, and stuck them, by means of melted wax, on to strips, and tacked 4 of the strips into a frame. Then I transferred the little larvæ into them. Some of these cells were one-fourth full of old royal jelly, left by the previous queen; and although it looked hard and uninviting, I placed the larvæ on it. I expected the bees would remove the old jelly, larvæ and all; but an examination showed that these old cells were the surest of the whole. Next I tried transferring eggs; and although I succeeded to some extent, yet as many as 4 out of 5 were removed. To be sure, this is all some trouble; but I think the queens will average enough better to pay; and as I said at the outset, good queens are the mainspring to successful bee-keeping. The difference between a queen that will keep 800 square inches of comb occupied with brood, and one that will keep but 600, is half of the surplus honey-crop; and the difference between one that will keep 800 square inches of comb in brood, and one that will keep but 400, is the difference between a good crop and no crop at all. Then let all of us see to it, that our queens are of the highest type possible to obtain.

I forgot to say, that to keep track of the cells in poor stock which were grafted with the selected larvæ, I stuck a 1½-inch wire nail through the comb near the cell. By this means it was impossible for the bees to steal a march on me by deceiving me as to the identity of the cells. Also I believe Mr. J. L. Davis, of Michigan, was the first to bring the transposition of larvæ to notice. G. M. DOOLITTLE.

Borodino, N. Y., July 18, 1881.

I believe there has been a caution, friend D., in these pages, against using the transposition process, when there were other larvæ in the hive. If I understand you, yours would all have it. To illustrate: If you transpose larvæ into queen-cells in a stock of black bees, if the black bees have larvæ of their own unsealed, they will often throw out the larvæ you give them, and use some from their own hive. I do not know why they do this, unless they dislike the larvæ because of its having been handled. We transposed a great deal last year, but this season have not used it. You have criticised the way friend Hutchinson and the rest of us have raised queens, quite a little; and when you advertised those raised in the good old way under the influence of natural swarming, we expected you were going to do away with the "unnatural" "tinkering" way of getting up queens. I do not mean to say that queens reared by transposing the larvæ are necessarily poor, aside from the danger of having the bees use their own larvæ after all, as I have mentioned; but is it really "according to nature," or are we to go according to nature, after all?

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WHY DO BEES STING MEMBERS OF THEIR OWN FAMILY SOMETIMES?

THE 31st of May I had a new swarm which I hived and went to work all right. I think the second or third day after, about six o'clock, I saw a ball of bees at one corner of entrance; I got a smoker, and opened and found a ball inside, and a queen in that. They had killed a number of their own bees. This was an old laying queen out of a hive in my own yard, for she had lost a foot, and I knew her, and she must have come out without many bees to accompany her; but why should she try to go in that hive?

Queen-cell, queen just coming out; let her in at the entrance, Saturday afternoon. I looked and found her all right, about an hour after. Sunday morning, looking around to see if all was quiet, I found this nucleus killing off their bees and carrying them out lively; so I got a smoker and opened the hive; found my young queen in a ball; took her out and caged her till Monday morning, and they took her again all right. I took the laying queen out of this nucleus about an hour before letting her in Saturday. July 9th, about 6 o'clock, I had her laying all day, looking round to see if all was quiet; found a three-story hive killing off their bees; opened them, but could not find any queen or ball, but they were a good deal excited. On the 10th they were still bringing out, now and then, a bee.

I introduced an Italian queen in a black swarm. I think the third day I found her dead at the entrance of the second hive in same row back of them, but no dead bees, no fighting. Why did the blacks drive her out? Here is what beats me. I took a queen out of a nucleus, carried her off half a mile, put her in a hive, and the third day went to let her out; took the cage out, and pried up the wire cloth; and she went like a streak. "Well, you are gone," thought I. I came home, and the third or fourth day went to that nucleus to see if they had started any queen-cells, and the first thing that met my astonished gaze was my runaway queen. I had marked her "sold" on the slate, so no mistake about it. V. W. KEENEY.

Shirland, Ill., July 11, 1881.

Your last case was just what I should expect, friend K. The queen, after taking wing, saw familiar objects, noted when she took her wedding trip, shortly before, and went back to her old home. It might have been in the very direction you carried her, that she met the drone when fertilized. When a queen flies away, I always look for her to come back to the hive in which she was raised, if it is any where in the neighborhood.

Juvenile Department.

I AM a little boy ten years old. Last year was the first that we kept bees. My pa bought two swarms. They swarmed once, and then we had three. Pa and I packed them in chaff. One of them died. They have swarmed, so we have seven; but one of them has been fighting until there are but a few left. We sent and got your A B C book. We think it a great help. We take GLEANINGS, and think it is a good journal. I like to read the letters from the boys and girls. I have one sister. She is 15 years old; I have no brothers. We go to church and Sunday-school at Hudson, which is four miles away. Now I will give you my address.

OSCAR J. ANDERSON.

Hudson, Lenawee Co., Mich., July 6, 1881.

Very good, friend Oscar. You are certainly ahead of some of the older ones in one point at least: you give, full and plain, your name and address. Now, please help your pa to keep those 7 safely through the winter.

I am a little girl 12 years old. I go to school, and study reading, writing, spelling, arithmetic, geography, and grammar. School will be out in one week. I am a Sabbath-school scholar. I get a nice paper every Sabbath. I have a little sister 5 years old, and a brother 3 years old. I belong to the Methodist Church. EMMA ECKLEY.

Lincoln, Cass Co., Ind., June 14, 1881.

May God bless you, your little brother and sister, that Methodist Church, and your wee little letter, friend Emma!

I could not go to school this morning. Pa divided the bees, and made four more swarms of them. I haven't been stung this summer. Pa gets stung, but it don't hurt him much. I have got a sister and two brothers. One of my brothers will be four years old the last day of June, and he likes bread and honey. We have got some buckwheat in blossom. We have lots of blossoms, and the bees work at them. ELIZABETH EDGMAND.

Columbus, Cherokee Co., Kan., June 23, 1881.

"Lizzie has a brother, and, what is very funny, though he is only four years old, he likes his bread and honey." Why, it almost takes my breath away to see that I came so near making a verse of poetry. Don't you think it might be called poetry by some folks, Lizzie?

I am a little boy 11 years old. My pa bought 12 hives of bees a year ago. The moths killed one of them and now he has got 11 hives. Our bees wintered all right, and we never lost a hive. Pa has got two numbers of GLEANINGS. I like to read, very much. EDDIE BELLEMEY.

Vienna, Johnson Co., Mo., June 23, 1881.

First rate, Eddie; we want to see you and your father keep up that excellent reputation for being bee-*keepers*.

I am 10 years old, and I am a Sunday-school scholar. I love to go to Sunday-school, and I love to attend religious worship. My pa keeps bees. I don't work with them much, but I like the honey. He kept 11 hives over last winter. They have been swarming and have increased to 18.

MARIETTA SPERRY.

Lincoln, Cass Co., Ind., June 13, 1881.

Very good, Marietta.

I thought I would write you a letter. My pa keeps bees; he had 7 swarms, but he wintered through with only one. I go to school, and study geography, arithmetic, and read in the Fourth Reader. I am only nine years old, and can not write very well. My name is KATIE McCRORY.

Jerome, Union Co., Ohio, June 9, 1881.

Pretty good for you, Katie, and you did right to tell the truth right out, how many your father lost. We think you write very well indeed for nine years old.

I send a dollar for GLEANINGS for 1 year, and 5 cts. for another mat chromo, because I think they are so pretty. I am going to give the other to my teacher. Our school is out this week. Last fall I had 21 stands of bees and all died but 4 stands; now they have swarmed until I have 22 stands. Our whole apiary consists of 36 stands. Pa has 4 stands, Aunt Clara 4, besides some nuclei. Most little girls say that it was their pa who gave them their bees, but I gave pa his. I will be 12 years old on the 30th of June. I have read the New Testament nearly through. LILLIE A. GANDY.

Churubusco, Whitley Co., Ind., June 30, 1881.

Well, I tell you what it is, Lillie, that is pretty well for only 12 years old. So *you* gave your *pa* his bees? I'll bet he is a pretty good pa, even if you did, and I guess he must have helped a little, a good many times. Eh?

I am a little girl nine years old. I go to school. My pa keeps bees. He had only 20 swarms last fall, 19 in the spring. He has sold 6 and has 28 now. Most of them are in chaff hives. I help him put the starters in the sections, and foundation in the wired frames. He had a great deal of trouble to make it stick to them till Mr. White told him how. He put a long handle on a five-cent piece that had a crease filed around the outer edge, and I run that over the little wires and press them into the wax. Ma fastens the top with melted wax. I will make a picture of the roller. My pa's name is E. D. Gillett. He bought one of your little dictionaries for me, and I am learning to use it. MARTHA GILLETT.

Brighton, Lorain Co., Ohio, June 14, 1881.

Well done indeed, my nine-year-old little bee-woman, both in writing the letter and making the picture; and to encourage such work and letters, we, besides sending you the book, credit you with 50 cents, and you can have it in money, or any thing you may select from our list, as you choose. Tell your ma that I do not think she needs to fasten the sheets at the top with melted wax at all. I think you will do tip top with the dictionary, Martha (that is my sister's name too), for you write already a great deal better than some of the big men who send for queens, etc.

I am a boy 11 years old. Papa gave me a swarm of bees on my tenth birthday. They swarmed last week, and so I have got two swarms of bees now. My school has just closed. Papa has got 125 swarms of bees. They wintered nicely; he lost only 5 last winter out of 115. Papa has a swarm that has swarmed every day for two weeks. I have two sisters and one brother.

CALLY DINES.

Fulton, Oswego Co., N. Y., July 7, 1881.

Now, Cally, you tell your pa I wouldn't have a hive that swarmed every day for two weeks, "nohow." I would break them all up into "little bits," and give each "bit" a frame of unsealed brood, and make them raise queens. Your pa must be a pretty big bee-man, if he can winter like that every time.

I have not seen any letters fram Cottage Grove, so I thought that I would be the first to write from here. I was 10 years old on the first of Feb. I hate to expose my ignorance in writing to an editor. I have never been to school but a few days in my life, but my sister and I study at home. I study Appleton's Fourth Reader, Harper's Geography, Quackenbos' Arithmetic, and writing, and take music lessons. I have made up my mind, that if this letter is put in the waste basket, I will try to write a better one next time. Papa and I put 22 swarms of bees in the cellar last November, and you may well guess that we had pretty sorry faces when we only found 10 live swarms this spring. Now please don't put my letter under Blasted Hopes, for it sounds *so bad*. And pa has now only six good swarms. Papa uses the Langstroth hives; he makes them himself; he made a new extractor, and extracted over 50 lbs. of honey last summer, but he thinks he won't have any surplus honey this year. Not one of our neighbors have saved a single swarm.

EMMA GURNEE.

Cottage Grove, Dane Co., Wis., June 12, 1881.

Why, Emma, when you started out with your letter I was afraid so much book learning for a girl of 10 years old would spoil her entirely for any thing useful; but if you really helped your father to—to lose 12 swarms of bees, I guess I won't think so after all. Did you really help very much when he put them in the cellar? You know I don't want my class of girls to get a habit of bragging too much; it would not look well before all this great company. Don't you think so?

This is a splendid honey year. There is a fine crop of red and white clover; there is a good crop of linn; it is in the prime now. Papa bought 20 three-frame nuclei of Mr. Henderson, Murfreesboro, Tenn. They are now pretty fair stands. We have extracted about 10 gallons. I have to do the extracting, for papa is superintendent of the fair. I take out the frames and then extract it, and then put the frames back in the hives. Our fair is improving; they have got a half-mile track. Everybody who has seen the fairground says it is the nicest in the State.

FREDDIE L. CRAYCRAFT.

Salem, Wash. Co., Ind., July 6, 1881.

Well, Freddie, are you sure your pa didn't help some about the extracting, even if he *is* superintendent of the fair? By the way, those half-mile tracks are sometimes bad things for boys, and even men too. You see, they get to driving fast horses, and besides the time it uses up, they sometimes get to be "fast" boys.

USES FOR PROPOLIS.

Children, you know what propolis is, do you not? Have you ever tried to put it to any good use? I use it in many ways, and there is scarcely a day that I do not use it for some thing. I noticed yesterday, that bees were in a cap of a hive, and on examining found that they came in through a hole in a honey-box. I got some propolis, worked it up soft with my fingers, and spread it over the hole. If I saw off a limb from a tree, I cover the wound with it, to keep out insects and rain. If the dipper leaks, it is soon mended with it, and the wash-basin can be cured of its leaky tricks by having a thin coating rubbed on the bottom. Old pans and dippers, used for dipping slop and feeding chickens, would be much better, if their holes were mended in this way. Some roofs leak around chimneys, which can be stopped by rolling up propolis into little rolls, and fitting it in nicely into the crevices, so that the shingles and bricks are glued together, leaving no cracks for water to run through.

Some of you have parasols or umbrellas with a carved fish or dog's head on the end of the handle for ornament. If you have not one of this kind, you may have seen them. We have one, and on the 4th of July our dog's head came off; it was so dry it wanted to drink. We worked some propolis then, and wrapped the handle with it, and put on the dog's head again, cleaning off all propolis that oozed out, after pushing it on. To-day we tried to pull it off, but it was no go; it was just as if it had grown there. Who will try propolis for budding and grafting?

LUCINDA HARRISON.

Peoria, Ill., July, 1881.

Well, I declare! I have wanted somebody to study up some use for propolis ever so long; and I have used it for mending leaks in the bellows of smokers; for patching torn queen-cells, leaks in honey-barrels, and the like, but I had not got quite round to mending tinware with it. I wonder if it would not mend crockery, if it was baked afterward to expel the most liquid portion. I know it will stick fingers together when one is in a hurry.

FEEDING IN JULY TO KEEP QUEEN-REARING GOING.

HOW FRIEND FLANAGAN DOES IT.

IN my last I asked if grape-sugar candy could be made in hot weather, and intimated that I was going to try it anyhow. Well, sir, I did so, and made as hard, smooth, nice candy, this hot weather, as I did in the winter. I gave it to weak colonies and to nuclei to make or start the queens to laying, and it is a perfect success. Our hot, dry weather has dried up nearly all sources of nectar, and to keep the bees rearing brood, feeding must be done. I made me 100 syrup-feeders; placed them in front of hive, and at just dusk took a bucket and cup and gave each one about ½ pint of diluted extracted honey. By morning all was removed except by two nuclei, and it was all I could do to save them from being "cleaned out," and even now every morning the other bees flock by thousands to those two nuclei, and I have to watch them very closely to save them.

How with those that had the candy? Not one particle of trouble; but the way they are rearing brood and building up, would do you good to see. Now, friend Root, you and Neighbor "H." just try it once, and see if you don't give up feeding in the liquid form, and report results; for they will take your word for it much quicker than that of a novice like me. Though it is some trouble to make candy for 100 or more colonies, yet, if you have to feed any length of time, it is far less trouble in the end, for it is no little job to put out 100 feeders every evening, and fill them and then remove every morning. "Let them stay until feeding is over." You can do so, but it don't look well to see the feeders lying around to be in the way, and cracked by the hot sun. At least, it don't to me. But, enough of candy and feeding for this time. Of course, the candy is made according to A B C, but more grape sugar can be used in hot weather. Be sure to give us a report in August GLEANINGS of your trip to Ferry's seed-gardens. E. T. FLANAGAN.

Belleville, Ill., July 16, 1881.

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OUR OWN APIARY.

IT is the Fourth of July, and the bees are luxuriating on a splendid flow of honey from the basswood just opening. I am happy, too, for God's blessing seems especially resting to-day on the roaring apiary of about 300 hives. A few weeks ago, and the prospect of being able to fill orders for bees and queens seemed utterly hopeless. What should we do? One of the worst troubles was that my health again seemed failing under such a load of cares, and I felt painfully that I lacked strength, wisdom, and judgment to care for so much business. It was only the old story over again, to go with it all to God in prayer, that he would help me where I was weak, as I have in every undertaking since the business began. I prayed for bees and queens, that we might fill the orders promptly, and thus help the kind friends who were sending in their money so freely. The bees came, and are coming yet, at less figures than I had any hope of getting them, after our bad winter; and within the past few weeks the queens have been coming too. Why, our friend S. D. Moore sent us one lot of 50 that reached us on the last train one evening. Think of 50 queens in one crate! It would have almost made me sick to think of introducing so many in so short a time a few weeks ago; but, taking courage after what I told you of last month, I with my own hands introduced 30 of them in a little over an hour. Many of them had a comb pretty fairly filled with eggs the next morning, and in one day almost every one of them was ready to send out to you with a pound of bees. I lost only two out of the thirty, and both those hives, although marked queenless, contained queens. Had the hives been as they were marked, I should have lost none. Ernest declares that much of my wonderful success is due to letting them out in the evening after the bees have had a very successful day's work in gathering honey. Very likely this is so. I was up before sunrise this beautiful Fourth; and as I stood alone in the apiary, so prosperous, and yet built up in so short a time, it seemed almost as if God was too kind to a poor, sinful, erring mortal. A few years ago, when I planned just what I see now, I had a sort of feeling that it was too visionary, and that so great a number of colonies could never be kept in bounds in one spot. I prayed then, that even my mistakes might be blessed. Shall I tell you how this prayer is being answered?

One of our smaller boys places the hive on a little bed of cinders, and with a scoop-shovel makes of gravel a nice sloping entrance to the hive. A few empty combs are placed in the hive, an enameled sheet over these combs, and the cover put on. A slate is also hung on the hive, that every thing may be done with system. A load of bees (the hives having been fixed according to the directions given in our county paper) comes in from the country — second and third swarms as they come out, and ordinarily of little use to anybody in July. Another boy takes them from the wagon to the Fairbanks scales. From this they are taken to the apiary and put into one of these hives ready prepared for them, a comb of unsealed brood being always put in the center of the empty combs. This makes them stay, no matter whether they have a queen or not. The empty hive is now taken back, weighed again, the owner paid, and, if I am busy, I need not direct in regard to the matter at all. If heavy, the swarm is divided. As soon as one of the parts has started queen-cells from the larvæ given them, a queen is introduced. We give them laying queens if any are on hand; if not, a queen from the lamp nursery. This lamp nursery is proving to be a splendid thing during this flow of honey. Most of the bees about the country now have some Italian blood in them, and some that we buy are very finely three-banded. In the latter case, we often send you a pound of bees and a dollar queen from one of these second swarms in less than 48 hours. This pays first cost of the whole swarm, and we have two queen-rearing nuclei left. Very simple, is it not? It is true, the boys do it all; but I tell you it takes watching and praying. To-day I found a new swarm all on the front of the hive, and, come to look, the boys had done it all right, even to putting in the frame of brood; but they had not opened the entrance. The bees could not get in at all. At another time, the bees were fastened in so they could not get *out* at all. Now, do not blame the boys: it is an exceedingly hard matter to jump from one thing to another and make no mistakes; and I tell you, I have never found many men in my life who would keep such an apiary all the time so nothing should go wrong or to waste. Multiply each operation up into the hundreds, and it is no trifling thing to carry it so straight. The prayer is answered, and we can fill almost any kind of an order you may send; and besides that, I am well and strong. The brain-work has not hurt me a particle. Please do not think I am boasting or advertising, for I wish and expect you to take this great industry off my hands. I have opened the way, and I wish you to "go in and possess the land," to succeed and prosper. I am to edit GLEANINGS; and to help me do this is the purpose and end of my apiary. When you take the trade out of my hands, and supply the demand for bees, I shall have room to try raising honey, as I used to a few years ago.

July 11th.—In buying swarms of bees by the pound, we have been a little curious to learn how much a natural swarm of bees would weigh, and the heaviest we bought last year was about 7 lbs. Well, a few days ago neighbor Clark brought us a swarm of hybrids, that he said he guessed weighed about 13 lbs. I suggested he had put several swarms together, but he insisted that it was just one swarm and no more; when weighed, they actually did show *eleven and three-fourths lbs.* As a sort of curiosity, I put them into a two-story Simplicity, furnished with 20 wired frames of fdn. The next morning I was up and in front of the hive, about daylight. Under the inspiration of the moment, I placed the hive on the bee-hive scale, and before night of July 7th they had gained 8 lbs. The next day, July 8th, they showed the astonishing record on the dial, of 13½ lbs. as their day's work. Of course, they built out the fdn. at the same time. As the basswood season began to approach its close, just here the amount is now tapering off each day; for on the 9th they gathered only 8 lbs., 6 on the 10th, and to-day, the 11th, I can perceive a slight disposition in the bees to rob.

25th.—Our apiary now numbers 310 colonies. Since the 12th, we have had to use the mosquito-bar tents almost constantly, or the robbers would dive down into each hive the very minute it was opened. In a large apiary like this they very soon learn to follow the operator constantly, and unless the utmost care be used, trouble will come in the shape of robbing that is no trifling matter. Even with the tents they have got a habit of pouncing on the entrance of every hive just as soon as the tent is removed; and unless the stock is a pretty fair one, and the entrance duly contracted, they would be used up pretty shortly. I believe we have had no case of robbing this season, so far, which speaks pretty well for John. All orders for bees are filled to date, and the last order for dollar queens will be sent off to-morrow, nothing preventing. We have been pretty badly behind on queens a part of the time,—at one time having orders on the books for 150. We have had one lot of imported queens from Italy this season; but our friend Charley Bianconcini did not seem to have his usual success in getting them through alive. We are daily expecting another invoice. I can not yet answer the question as to which race of bees is best, Cyprian, Holy-Land, or Italian. I feel pretty sure the Holy-Lands excel in the rapid production of brood, and therefore in bees; but they are not, as a general thing, quite as large as the others, and I am not sure they gather as much honey. The Cyprians are as large as the Italians, and perhaps a little handsomer; that is, they show full yellow bands, and are what almost anybody would call nice Italians. The complaint made, that they are cross, I do not believe belongs to *all* of the Cyprians. Those we had last fall were very gentle, while those from the queen I purchased of friend Hayhurst are as nervous and touchy as almost any hybrids you ever saw. We have ordered of friend Jones both Cyprian and Holy-Land queens this season, but he has as yet sent us none, nor have I heard of his sending any to any one.

RAISING BEES IN A GREENHOUSE.

CAN WE RAISE BEES EARLY IN THE SPRING, IRRESPECTIVE OF THE WEATHER?

SEVERAL of the friends will remember what I said last spring on this subject, and many of our older readers will remember the experiments I have made in years gone by. Well, those who have followed the matter can tell with what eagerness I read the following letter:—

> Last year I was given a half-interest in a swarm of Italian bees that swarmed, and which I had the good fortune to keep from going away. I tried to hive them and was successful. They were a late swarm, some time in July. Parties said they would not live. A neighbor who had 16 hives of bees told me so. However, when cool fall weather came in December, I thought I would keep them if possible; so I moved them into my warm greenhouse, set them upon a high shelf, built expressly for them. That was on the 5th day of December. I kept them there, and left the hive open so they could fly whenever they wanted to, and there they stood until the middle of April. Then I set them out on their summer stands. I looked into the hive, which is sectional; I think they had about 10 lbs. left after wintering; did not get 50 dead bees the entire winter. Last week they swarmed. I caught them, put them in a hive that had been used, and found the queen. I clipped her wings; in an hour they came out. I looked, and found the "old lady" in the grass; but before I found her the bees had all gone back into the old house hive. I put her in with them this morning; they came out again, cut the same caper, and went back again. What I want to know is, how to swarm bees artificially. I saw your advertisement of A B C for beginners in the bee business, and I should be glad to receive a copy of the work to enlighten me on bees. The man that said my bees would not live over winter lost 15 hives of bees himself out of 16. So much for his judgment in that case.
>
> W. J. KIDD.
>
> Logansport, Cass Co., Ind., June 7, 1881.

I immediately sent him a complete A B C, with the following letter:—

> We send you a whole book, friend K., and for pay I want you to tell me if those bees flew in the greenhouse, and went back into their hive again, without flying against the glass, and dying. If I had time, I would go all the way out there to find out about it.

It is the unsolved problem, to fly bees inside a building or greenhouse.

In answer to this, I in due time received the following:—

Your A B C complete came to hand Saturday. I was so surprised to find so much general information about the busy bee. This morning I received your letter, stating that you would not ask any thing more for the payment of the A B C, if I would tell you about those bees of mine. Friend Root, I think you are very liberal indeed. I thank you kindly, and will tell you, as nearly as I can, what you ask for. The bees are Italians, very strong and prolific. They were a July swarm; came late; do not know the date. Kept them on stands until Dec. 5th; built shelf up about 6 ft. from floor of greenhouse, close, in N. W. corner, sheltered by 6-in. walls from W. and N. This was all I did put them on. This shelf left the mouth of the hive completely open; if they wanted to come out they did so; if not, they could do otherwise. Through the warm days of February and early part of March, during the warm part of the day they would come out by the hundreds and fly about the house overhead. Sometimes I would go in and attach the hose to the hydrant and sprinkle plants, bees, and all, when they would hurry for their hive. This would frighten them home. Other times or days, when I did not need to sprinkle the plants to keep the atmosphere moist or humid, they would wing their way about the greenhouse, seek the sunniest places, cluster in bunches of a dozen or more; when the sun left them in the shade they would go back to their hive. The temperature of the greenhouse would be, in the day time, about 65°; at night, 50 to 55°. About the 20th of March the sun became so powerful under the glass that the temperature would rise to 90°; at this the bees would be out by thousands. But I found this would soon spoil my plants, for they would spot them so much with their excrement. I had to move them into a colder greenhouse to keep them in the hive. The place I now put them in had no fire, but did not freeze at night. Here I kept them until about the first of April. Old Sol began to send down his rays so hot and penetrating, that even a greenhouse without fire was up to 90° at times. I knew it would not do to let my bees out, for I had doors and ventilators open, and they might get lost; so I made a wire frame about 4x6x12 inches, and placed it in the entrance of the hive. This they would go into and buzz for an hour or two, until the temperature was lowered. Then they would seek their hive again. Toward the last of April I put them on their summer stands; have secured from them already two good swarms. The last one I hived this morning. She is a virgin queen, a beauty.

I love bees, and like to work with them; never used a veil in my life to handle bees, and I get along first rate.

I do not know any thing more to tell you, except that you can write to R. R. Crooks, a bee-man across the street, and hear what he has to say about the care my bees had the past winter. W. J. KIDD.

Logansport, Ind., June 13, 1881.

Many thanks, friend K. The only point I wished to make was about their getting back safely into their hives at night. Did you find no dead bees on the floor in sweeping? Did you see any of them on any of the flowers in the greenhouse, or were there no flowering plants? Did you ever try feeding them any thing during the winter, outside of their hives? Lastly, did you not see them spot the plants at all with their excrement until the air became very warm in March or April, as you say? I have sometimes thought the temperature would be more even in a large greenhouse; will you tell us the dimensions of the house you kept these bees in, friend K.? About how high is the glass from the ground?

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FLORIDA AS A BEE STATE

WE have frequently seen reports from Florida, but none from Dade county, and I will give you a few items. January last there were no bees kept within 75 miles of us, and none in this county that we know of; occasionally a wild swarm in the woods, but very few near the coast. We bought 2 colonies of Frœscher (he who sent you those nice oranges), brought them home in a sail boat, 150 miles. Some of them died, and colonies were weak to start on. They commenced immediately (in Jan.) to gather pollen and honey, and to raise brood. In March the hives were booming, and we went to dividing. Our neighbors were getting the bee fever *badly*, and our idea was to get lots of swarms, sell them, and make "a heap of money." We committed the blunder usually done by beginners; *viz.*, made our swarms too weak, and have not done as well as we might. Result: We have sold 4 swarms; 1 ran away; 2 were destroyed by ants, which accident might have been prevented, and we have two weak colonies left. It is the best cash investment we ever made, and the experience is worth still more.

There seems to be a continual succession of flowers and bee forage the year around. Many trees and plants yield their sweet nectar, that we had not supposed belonged to that class. The mastic-tree is now in bloom. The gum limbo, stoppa, wild locust, sweet bay, persimmon (a kind that does not fruit here;) all and others of which we do not know the name, have blossomed in turn; also the cabbage and saw palmetto. The latter is the best bee-plant in Florida. Of course, the question of wintering does not come in here. We raise the tenderest tropical fruits without protection, and were shipping tomatoes and other vegtables and fruits all last winter.

Have noticed the mosquito hawk take occasionally a bee, but not a serious pest.

Success to GLEANINGS! May it be the means of leading many a poor soul to a better life, as well as to enlighten us on the bee question.

F. S. DIMICK.

Lake Worth, Dade Co., Fla., July 5, 1881.

NEIGHBOR CLARK who sells us bees by the pound has just mentioned, incidentally, that he uses a paper tunnel instead of our tin one, and that it does very good service for several times using.

BEES sometimes gather pollen from timothy. As they only do it early in the morning, I have sometimes thought they did it rather for the fun of it; may be while they are waiting for "breakfast to be ready," before going out into the fields and woods on their regular day's work.

Ladies' Department.

I AM not a Quaker, but the spirit moves me to write you how I wintered my bees, or, rather, how I winter them, as I have practiced the same method for three winters *successfully*, and have not lost one. I first make two division-cushions for each hive by taking a brood frame (mine have the heavy top-bar), and making a sack for it out of "Indian Head" muslin, enough larger than the frame so that, when stuffed with chaff, it will entirely fill the space between the frame and hive. In filling it I am very careful to stuff it evenly outside of the frame, at the bottom and ends. It is tacked to the top-bar, and then quilted through a few times to keep it from bulging out. I then put one of these on each side of the bees, giving them only what room they need and a piece of muslin or piece of an old quilt over the tops of the frames. Now I am ready for packing; so I take all the old rags after the carpet-rags are cut, and fill, or partly fill, the space between the cushion and outside of the hive, and put a sack of them on top at *least* three inches thick. Now they have a porous material on three sides that will allow the moisture to pass off, but retain the heat, just as our woolen clothes do. This is the best use for old rags I ever found.

My bees came through the winter strong, and I just *can't* keep some of them from swarming. One swarm has filled 6 six-pound boxes, and have the second six almost filled with combs, and they keep the lower story crammed, the queen having brood on 8 frames, and I have taken two frames full of brood, honey, and bees, from that hive; but they have not swarmed. We read of "non-swarming hives;" but are there any "non-swarming" bees? If there are, mine must belong to them. Is this more than an ordinarily good queen? BUSY BEE.

The above is by a lady who says we mustn't publish her name. I should much prefer full names and addresses, but I suppose I must obey orders. We formerly made all our division-boards as above, but every little while the bees would eat through and let the chaff out, and if they didn't do that, the combs built next to them would be waved to match the quilting. This determined me to have nothing hereafter next to the combs, unless it was flat and straight, like the sides of the hive, even if it is some work to make it.— We think your queen, my friend, about a fair average one, from the description you give.

I am an interested reader of GLEANINGS, and a member of the A B C class. Fully two-thirds of the bees in this vicinity died. One of our neighbors lost his entire lot of eleven stands. Another one saved 4 out of 17, and another 8 out of about 30. As regards my own, I saved 2 colonies out of 5. They were left on summer stands, 4 of them in Simplicity hives, with chaff cushions on top. The other in a box hive. The 2 have increased to 6 by natural swarming. They are all in splendid condition, and I have another good swarm that I bought of my boy—one that he found.

ANOTHER NOVEL BEE-HIVE.

Well, you need not try to guess where he found them, for I don't believe you could guess in a week. He found them in the barn loft, under the hay, fully 20 feet from the ground. There they were, as busy as you please, flying in and out at a crevice at the rear end of the barn. I suppose they had been there but a few days when found, as they had stored but a small amount of honey.

Bee culture is a branch of industry that is greatly neglected in this locality; true, there are a good many who have bees, and some have quite a lot of them; but they are generally neglected, or attended to in a kind of hit-and-miss fashion. I do not know of a man in the range of my acquaintance who takes a bee journal of any kind.

THE SIMPLICITY HIVE.

Box hives are mostly used, although there are some who use patent hives of various kinds; but the Simplicity is my choice. It is far ahead of any patent hive that I have ever seen; and if there is any thing nicer than a Simplicity section box well filled with honey, I would like to see it. Mine were nice enough to take first premium at our district fair last September, anyhow. I suppose you will think this a rather lengthy letter from an A B C scholar, especially one who has the care of a family, to say nothing of the hundred and one things devolving upon a farmer's wife in the midst of a bountiful harvest, for which I thank God in my heart. May he bless you in your good work, is the sincere prayer of SARAH E. DUNCAN.

Lineville, Wayne Co., Iowa, July 18, 1881.

Blasted Hopes.

Or Letters from Those Who have Made Bee Culture a Failure.

LOSS OF 800 BY ONE MAN.

FOUR-FIFTHS of the bee-men here use the Mitchell hive, and fully four-fifths of their bees are dead. We have heard here that Overmyer, the big bee-man of Sandusky Co., Ohio, lost over *eight hundred*—all he had. He uses the Mitchell hive. They have "sung" Mitchell till the hum of the "busy bee" is heard no more (in the Mitchell hive;) gone to Blasted Hopes—some for the second time in three years. The old box hive is victorious again. C. W. Doren and Frederick Baker have each a colony that has stood the test for 25 winters. How is that for the old box-hives? A few years ago, Doren told me that the least that old colony brought him in any year was $6.00. Those colonies are blacks. I saved both of the queens you sent me last fall. I lost only one colony last winter; bees are doing splendidly, with good prospect of a big basswood harvest. ISAAC FEASEL.

Bettsville, Seneca Co., Ohio, June 6, 1881.

The above may be only a report; and if so, we hope friend Overmyer will correct it. I should hardly think the Mitchell hive would be better or worse than the box hive; it is not the hive we object to, but Mitchell's way of defrauding his fellow-men, year after year. See report in Humbugs and Swindles.

You need not send me the GLEANINGS this year, for my bees are starving; for the drought has killed every thing. G. H. SEAVEY.

Hallowell, Maine.

I had bad luck with my bees last winter. I had 24 swarms last fall, and have one very weak one now. I. C. PETERS.

Greenleaf, Meeker Co., Minn., June 7, 1881.

VIALLON'S CANDY.

HOW IT WORKS UP TO DATE.

DO you know that, after reading my letter in GLEANINGS, that it looks as if I was asking you to pay for the candy, which was certainly not my intention. I suppose you remember that, in the spring of 1880, when you wrote to me that the candy was a success, and asked if I had any objection to giving you the recipe, how I responded, and stated that I should be pleased if I could help the bee-keepers in some way, etc. I am well aware that you experimented on the honey candy in 1878, but you omitted the principal ingredient—flour. Now, if you have lost several valuable queens this season with this candy, the reason must be that the candy was cooked too much, or it may be due to the Peet cage, as I must say that I find it too shallow, and on account of the tin it is too cold in March, April, and part of May. Well, friend Root, I wish I were near you, as I would go and make the candy for you, and guarantee every queen you would send out, and you may rest assured that the $100 would be—not called for.

There is no greater pleasure for me than to be among my bees and in my orchard. By the way, I have been enjoying ripe peaches since the 25th of May, and I wish you were closer to us, friend Root, as I would have the pleasure of sharing the peaches with you, and also several varieties of plums.

June 14th.—The above was written just after reading GLEANINGS and laid aside for the next day, and I think I did right in not sending at once, as I have since had two reports of dead queens. Yes, 5 reported dead to date; 2 were received very weak, and died next morning or during the night; in one, all the bees were alive but the queen; in another every thing was dead, and but 4 days in route; and in another every thing was dead, and 14 days in route. This is a little over 1 per cent, as so far nearly 400 queens have been mailed. Now, this is from all those I have heard from; but I have mailed many queens, not included above, since a week, not yet heard from.

I did not write the above for publication, but you may speak of my loss of 5 queens, as those having received the dead queens may think it strange that I leave every one under the impression that I lost no queens. P. L. VIALLON.

Bayou Goula, La., June 6, 1881.

Many thanks, friend V., for your valuable items, as well as for the offer of the peaches. I believe we all know you are one who is working for the good of the people, and we shall call the candy by your name, even if you will not accept any thing more. If you will excuse me for reverting to it once more, I would say that I did use flour, and abandoned it because I got an idea that it, like pollen, rather disposed the bees, when confined, to dysentery. The queens you have sent us came to hand in such excellent trim, that I have remailed a great number, without even introducing them, and I believe all have gone on right. A lot of five are now near me, from which the address got torn off, and they came back to us, but all lively and in excellent trim. Your candy is certainly a wonderful improvement for queens; but for pounds of bees, we must have the water-bottles also. With a bottle in every section, we have had most excellent success; but when I tried using only one bottle in a cage, losses commenced at once. Can we not ascertain why you lost the few queens you have mentioned lately? Your cage is an excellent one, only that it does not admit of being used on the comb, like the Peet cage.

FRIEND BUTLER'S MISHAP, AND HOW HE DID GET MARRIED AFTER ALL.

SEQUEL TO THE LITTLE STORY ON P. 342, LAST NO.

SINCE I wrote you in regard to that "nucleus," I was stung by some bees, and, thinking perhaps you might be amused by reading some of the newspaper accounts, I will send you one taken from the Chicago *Times*, June 15, which paper is somewhat mistaken, as you will see by this note:

WHY HE DIDN'T GET MARRIED.

BLOOMINGTON, ILL., June 14.—Thomas Butler, of this city, was to have been married this evening, but this afternoon accidentally overturned a hive of bees, and was nearly stung to death. He is in a dangerous condition.

I settled a swarm in the top of a tree in my yard, and had the limb cut off, and was coming down very carefully with the bees, when a limb gave way with me and the bees, and I tried to see which could land on earth the quicker. I think from the number of bees that were mashed, that they landed first. I wish you could have been near so you could have seen the performance, and you could have had cartoons for some time. My sister took nine stings out of my right ear, and I was stung in the face as badly. This was the 14th, the day I was married. At 12 o'clock I had both eyes closed, and at 6 P.M. I had them both open, and was married at 8. The number of stings I received was no more painful than one sting would be, and one sting does me no harm.

The little "nucleus" is started, and is one of the happiest little colonies on earth.

THOMAS BUTLER.

Bloomington, Ill., June 19, 1881.

UNDER THE BOX-ELDERS.

IT was one of the beautiful mornings of the last days of April, when, as we were passing the residence of our cheery friend Duster, we saw that he had at last set out his bees, and he himself standing among the hives. We were quite anxious to know how his bees had wintered, so we opened the gate, and joined him at once. Friend Duster was evidently in a deep reverie, and a pleasant one too, for a smile was on his lips, and his whole face fairly beamed with happiness and satisfaction. Our somewhat noisy morning greeting was the first he seemed to know of our presence. Pointing down the valley where the Inlet, a small sparkling stream of water dodges in and out, its crooked way traced by the large willows overhanging its banks,—

"See," said he; "was there ever a picture more beautiful than that? I can hardly realize" (and he went on in a sort of musing way) "the change of two weeks when this scene was white—covered with snow. The finger of the great Unseen" (and here he reverentially raised his hat) "has touched the earth, and the grass springs forth; the trees, and they bud and blossom. To me, this morning, so sudden has it all come, it is a transfiguration, and I bow before its power and beauty. The very air is almost oppressive with fragrance; 'tis the breath of spring; new life: spring is here!" And we clasped hands in congratulations. "Well, you want to know how my bees have wintered? I got them out the 16th of April; had no fly for 160 odd days; have lost one hive by starvation; the others, as you see, are all in good condition, and many of them quite strong. I gave them rye meal for two days, and then they commenced to bring in pollen—the soft-maple first. It lasted about three days. Next the box-elders were roaring with them for four or five days, and then the willows took their turn. I tell you," said Mr. Duster, "every thing is just 'booming,' and the very trees are bound to take a hand in; and if we bee-keepers only take time by the forelock—keep pace with this rush of things, we shall reap our reward. Spring has been a little tardy, and, to meet Summer at the appointed time and place, dressed in all her beautiful garments, and bringing her usual and matchless gifts with her, she is hurrying and will hurry on to the tryst; will be on time, and he who heeds the unmistakable signs—gets his hive-boxes and cans ready—will reap a satisfactory harvest.

"I see you are in a hurry," said Mr. Duster; "but before you go I wish to express my sympathy through you to friend Novice in his loss, not in bees only, but it will unsettle him so in regard to the way of wintering them. He's got lots of pluck and perseverance; tell him to put in a chunk of faith—enough to stiffen the batch (and I confess it wants to be made pretty stiff after the experience of last winter), and all will be well yet. One thing more, and I'm done. Tell him to lay aside next fall his enamel-cloth covers, and put on straw mats directly over the bees (and sides too if he likes), then cover with chaff or fine dry leaves, and, my word for it, he will see next spring brighter combs generally than he ever saw before. And, please, don't forget it."

R. H. MELLEN.

Amboy-on-Inlet, Ill., June 18, 1881.

SECTIONS ON IN WINTER, AGAIN.

ARE WE AT FAULT IN THE MATTER OF VENTILATION?

THERE seems to be quite an inquiry as to the propriety of leaving sections or boxes on the hives all winter. I have never had any experience in my own apiary, but have seen it tried in others year after year with apparently good results. An uncle of mine, Mr. J. S. Phillips, an old bee-keeper of 30 years' experience, has practiced it for some time; and as he lives just "across the corner" from us, we have had an opportunity to note how the thing works. Until within a few years he has been a bee-keeper of the old school, and kept his bees in box hives, getting his surplus in boxes holding 10 or 12 lbs., placed over holes in top of the hive. At the close of the honey season, the boxes were taken and emptied, and returned again to their place on top of the hive, and there left all winter, being held in place by a large stone or heavy piece of iron. This has been his practice for a considerable period, and I have observed that (with but one or two exceptions) he has never lost a colony that had plenty of honey to carry them through. Later, he became a convert to the new system of bee-keeping, using movable-frame hives, and obtained his surplus honey in four small boxes placed over slats in the honey-board. In the fall they were emptied and returned to their places, and the bees were left alone, to live or die as they chose. As before, all wintered well (that were not short of stores) for several years; but in the fall of 1879 he came to the conclusion, that if it paid others to protect their bees it would him; and so, suiting the act to the thought, he moved them together and covered them with corn-stalks. As you will remember, the winter was an unusually mild one; the bees became very restless, and what did not die outright came out very weak in the spring of 1880; and as the season was a very poor one they did not cast any swarms, but were generally strong, and had plenty of stores last fall. This time he thought he would try chaff. Well, the upshot of it all was, that he found himself minus bees when Shawondasse (the south wind) paid us his accustomed visit. Now, I do not pretend to say that the empty boxes saved them, or the packing killed them; but we would say it had some thing to do with it. I have given you the facts just as they are; but, as I said before, I never tried it in my own apiary. It did not seem reasonable, so I dared not try it: but, Providence permitting, I shall try the plan with a part of my bees this next winter, and will report results.

F. L. WRIGHT.

Plainfield, Liv. Co., Mich., June 28, 1881.

HAYHURST'S TEA-PARTY.

ALSO SOME THING ABOUT CYPRIAN BEES.

ED. GLEANINGS:—Availing myself of friend Hayhurst's invitation, I recently found myself at his hospitable mansion. After paying proper respects to his lady and late winter "queen" who still keeps on piping, I repaired to his apiary. I almost believe he has got "Root on the brain," for he tries almost every thing recommended in GLEANINGS. I might except sawdust for bottom-boards, but scarcely any thing else. At one time he had a grapevine on the west side of each hive, but he found it easier to raise grapes in some other locality, and up came the vines. He thought he would increase the natural size of his bees by using foundation with only twenty cells to the inch, and secured a puff in GLEANINGS for purchasing, at one time, 100 lbs. of foundation. The bees hatched in the cells were indeed somewhat increased in size, but they all happened to be drones, and he speedily had nearly 100 lbs. of beeswax to sell. He adopted the chaff hive exactly as recommended in GLEANINGS, and certainly has a fine lot of them well filled with bees and honey. As he lost no bees to speak of last winter, he throws up his hat for the chaff hive, although every one of them cost him nearly four dollars.

But what do you think I found him doing? Actually killing drones, and from his imported Cyprian queen too—from the identical queen that he paid Jones $16.00 for last fall!

"What are you doing that for?" said I.

"The rascals sting so," said he. "I shall destroy every Cyprian drone in my apiary to-morrow."

CYPRIAN BEES.

Very beautiful are Hayhurst's Cyprian bees. The queens are immensely prolific, and the bees great honey-gatherers. Remove the queen from the hive, and the bees start a great number of queen-cells. We counted upward of 70 in a single hive. Then the queens are very warlike, and will fight each other to the death in less than two minutes after hatching. This necessitates a separate cage for each cell, and then the nucleus from which a laying queen has just been shipped, in about four cases out of five, will kill a young virgin queen as soon as introduced, and probably the same day a fertile worker will usurp the place of a genuine queen, and render subsequent efforts to supply said nucleus with a queen useless. But when a queen is safely introduced she flies from the hive about the fifth day, and repeats the excursion nearly every day for a week or more before she returns fertilized, and about two-thirds or three-fourths of them get lost during this ceremony. Then the Cyprians are undoubtedly hardy—perfectly impervious to smoke, bell-ringing, and all such foolishness. In order to get them to gorge themselves sufficiently to obtain a pound for shipment, it is actually necessary to kick over a hive; and then Hayhurst says they will find a smaller hole in a pair of pants than any insect he ever saw. Several times they have not only driven him into the honey-house, but out of that and through the yard into his cellar. Subjugation is next to impossible, and coaxing not much better. He raised a frame, well covered with bees, very carefully; got them in proper position above his trap, thinking to secure half a pound at least; gave them the important shake, and, presto! every bee went into the air, "zip!"

"I'll sell that imported Cyprian queen for half price, and throw in all her progeny, if anybody can catch them," said he.

He wanted me to take some of the queen-cells home and rear them for experiment; but about this time his confounded Cyprians had found my horse, more than 200 yards distant, and were paying unappreciated respects to him. I concluded not to wait for cells, and the unusual activity of my horse about this time soon removed me from the vicinity of Hayhurst and his Cyprians.

S. W. SALISBURY.

Kansas City, Mo., June 27, 1881.

MRS. LUCINDA HARRISON ON GRAPE SUGAR.

FRIEND ROOT:—I extend unto you my right ☞ in token of approval of your present position on that vexed glucose question. Your former one was always a sore trial to me, for I was fearful that the *money* that was in it, so warped your better judgment that you could not see it in its true light. When you invoked the blessing of Heaven upon the Buffalo Sugar Co., it was a dose too great for me to swallow; and the longer I chewed, the bigger it got.

Hamlin, who is the principal member of the Buffalo Co., has large works here (Peoria, Ill.), and has recently purchased an extensive tract of land in the vicinity of Des Moines, Iowa, to erect glucose works there. He has acres upon acres of lime-kilns to manufacture that compound for his manufactories. He knows no God and no Sabbath. His employees are not freemen, but slaves, compelled to work every day in the year, with the eye of a watchman upon them lest they cease from their toil, and watchmen over watchmen, with small wages; and when he walks through his vast works, an armed guard protects him. The smoke from those vast chimneys never ceases, nor does the deadly waste that pours into our magnificent river, to be the certain death of the finny tribe. The fumes that are wafted over our city, from the boiling vats of corn starch, containing deadly chemicals, can be compared to nothing else than to pens where a million pigs are kept and fed on distillery slops. We who have braved the privations of frontier life to obtain a home have no redress — for there are millions in it. Car-load upon car-load of lime, nitric and sulphuric acid, are daily used in the manufacture of glucose. There have been syrups sold in this city that have eaten a hole in a table-cloth! This company have bought *chemists* as well as nitric and sulphuric acid.

But the people are awakening. They are inquiring why they feel so strangely after eating sugar and syrup, and what makes the little one's lips so black, as if it had been licking the ink-bottle after its meal of bread and syrup — clear as honey.

Brother Root, you are a busy man, I know; but take time, and if you can't get time on a week day, do it on Sunday. Tie up your handkerchief full of your best Buffalo sugar; sit down by a pail of water, and wash it; and when you are through, tell us what you have left, and whether the water is sweet or not, — and what kind of stuff is left in your handkerchief. Be candid, and tell us all about it, if it does hurt worse than any bee-sting you ever had; and whether you would like to give it to Blue Eyes or the baby to eat.

I can not call down the blessing of Heaven upon the Buffalo Co.; but may Almighty God bless good father Langstroth, and continue unto him the use of his mental powers! May he long stand upon the watch-towers of this great industry, that he has given his lifetime to promote, and run up the signals of alarm in full view of his *bee children*, warning them of the vagaries of such impulsive persons as A. I. Root and— MRS. L. HARRISON.

Peoria, Ill., July, 1881.

Many thanks, my good friend, for the facts you have given us. I should have suggested that you were going as much one way as I did the other; but as you close by putting you and my poor self both in the same category, I guess I won't say much. The things you speak of are of course awful; but are you sure all sugar refineries do not present some thing of the same state of affairs, both in the way of chemicals and a disregard for the immortal souls of the employees? Are you not going a little on the same strain you did when you denounced comb foundation and all who made and recommended it, a few months ago? Begging your pardon, my kind good friend, while we are in the way of confessing our mistakes, would it not be well for you to recall some of those hard expressions you used there, to the effect that it was all done for the sake of the money that could be made at it? Most heartily do I join hands with you in all you say of our good friend Mr. Langstroth. In fact, I can join hands with you in the spirit of all you write.

DON'T DISTURB THE BEES AFTER COLD WEATHER.

AN IDEA IN REGARD TO THE MATTER OF LEAVING THE SECTIONS ON ALL WINTER.

I HAVE just been reading your May No., and I have an idea in my head why some have good success in wintering bees with sections on, and others don't, and why so many fail in wintering in any of the common ways some years, and other years winter successfully, and why one swarm winters well, and another, treated just the same, dies.

The difference is this: We overhaul our bees too late in the season, and it comes on cold, and they don't have a chance to plaster up with propolis and make it tight, while another, perhaps fixed up one or two days before, had an opportunity to work a day or two and patch up. I've noticed, in opening hives the first time in spring, where the duck or enameled cloth was stuck down so firm I could hardly pull it off, there were no signs of dysentery, but every thing clean and bright — bees lively and strong; but where the cloth was not stuck down to the top of frames they would be all blacked up, and smell badly. Now, I think when they have it tight, as nature teaches them to do, they don't consume as much honey to keep warm, and will go a much longer time without a fly than in the other case. I lost 3 swarms out of 14 the past winter; one of them I neglected to make passages for through the comb, and they starved with plenty of honey on the other side of the hive. One had dysentery, one spring dwindling. The rest are doing finely. I extracted 50 lbs. of apple-blossom honey last week, which was very nice. They just commenced on red raspberry, of which we have 4 acres of the Brandywine. Now, Mr. Editor, please call for proof of my idea, and see if those who wintered successfully with sections on were not those who did not touch them after the honey season was over; while those who lost them fixed them up late, and broke the propolis all up, which they failed to repair, and consequently lived in a draft of cold air as long as their bee nature could stand it, and then gave up the ghost.

W. D. HINDS.

Townsend, Middlesex Co., Mass., June 16, 1881.

My experience has been very much like yours, friend H., and I can not remember having a hive well waxed up with propolis, and filled with honey clear down to the corners of the combs, but that wintered well. Since you speak of it, I recall that our bees had such good care last winter that we opened and examined each hive at every mild spell during the winter. At the first examination, about Christmas we were congratulating ourselves that they were keeping splendidly; but from that time on they seemed to go down. Who can tell us more about making them wax up every thing solid, and then letting them be until May?

THE BEES OF INDIA.

BY ONE OF OUR MISSIONARY BROTHERS.

BRO. ROOT:—You have spoken of wanting to know about bees in India, so I am going to tell you what I know, which will not take long, as I am not well posted in "Beeology." I have seen three varieties of bees here. The most common is the smallest variety, a specimen of which I inclose. I do not know in what condition he will reach you, but his size was that of the figure marked when he started on his journey. This variety hang their combs on trees and bushes in the open air. In one walk the other night I came across two swarms of these bees. There is a common-sized variety which are not so common, but which are sometimes domesticated. Then there is a very large variety which are quite common, whose acquaintance I have no wish to form. They live in the rocks and trees in these hills. A year ago a swarm alighted on a tree five or six rods from the street, and woe to man or beast who ventured along the road. The antics which they caused the natives to cut were amusing to us who sat secure in our bungalow. Indian honey is not of a pleasant flavor. What it could be made through proper culture I do not know. The bee which I inclose is a young one of its kind. I do not know that this small variety sting, although the natives say they do. But I have never seen them manifest any such disposition. The natives will declare that every snake is poisonous, when the fact is, only four or five varieties are poisonous out of about twelve found in India; and so it is, I suppose, with the bees.

Some time I may be able to get specimens of the different varieties of bees, and I will preserve them in alcohol and send them to you in a box. But I have little time for any thought but upon the one great object that calls us here. There are many very interesting things in the natural world about us, about which I should like to write; but we have to see so much undone in the way of spreading the gospel among these perishing people, that we are forced to leave other things alone, that we may tell the "old, old story." It is the same precious word here as in our own country; "the power of God unto salvation to all that believe." Many thanks for GLEANINGS. We cut out the Home Papers, and sew them together, and have quite a little book. Our work seems prospering. There is a little community of Christians gathering about us, which we trust is the little leaven which is to leaven the whole lump. But, oh the awful moral darkness! Pray much for us. We are quite well, and very happy in the Lord. The Christians which we baptized lately, a man and wife and child and a blind boy, give good evidence that they have been born again, and by well-ordered lives glorify God among their people. Mrs. Sibley unites in much Christian love to you. May God bless and prosper you is the prayer of

J. W. SIBLEY.

Chikalda, India, May 24, 1881.

Many thanks, friend S. I should enjoy hugely an encounter with that swarm that frightened the natives so much. I presume it could not have been the far-famed Apis dorsata, that we have heard so much about of late. I should enjoy, too, being with you a little while in your work for the Master. We often think of you, and shall always have a warm corner in our hearts for you and yours, away off there in your foreign home. May the Lord bless your work!

FRIEND PETERS ON UPWARD VENTILATION.

ALSO SOME THING ABOUT LEAVING SECTION BOXES ON ALL WINTER.

ED. GLEANINGS:—The present advanced condition of apiculture is due not only to the thinking men who observe facts, but also to the long years of accumulating data by the unscientific mass of bee-keepers in times gone by. Practice and patient observation by this latter class laid the ground work of a new industry, which, though long delayed, has culminated into one of the useful branches of rural economy. Being based upon experience and facts, the progress of apiculture should be promoted by all who feel an interest in it, by contributing such facts as may fall under their knowledge. On thinking, I am reminded of the recent inquiry in GLEANINGS, "Should section boxes be left on in winter?" For this climate I answer unhesitatingly, yes. But in your rigid winters it may not be the best plan, but I think it will. Here, I know, bees are more comfortable with than without them, either empty or partly filled. On account of the respiration, the accumulating moisture emanating from bees requires an absorbent to prevent frost and ice in the upper part of the hive. I once thought that bees stowed away water for winter use, and that freezing ruptured the cells, and where moderate weather occurred the water escaped from the entrance; but now we know the cause and the remedy—this moisture should escape or be absorbed. Nothing answers so well as the dead-air space in the sections and the absorbent surface of the sections themselves. In box hives, surplus boxes answered the same end. You use sawdust, chaff, blankets, etc.; we use dry leaves, cotton seed, etc., but every thing used by me can not be compared to sections covered with the quilt, and a close cap. The bees close every aperture with propolis, and the air heated by the warm temperature of the bees occupies the sections while the moisture arising is absorbed by the sections, keeping the interior of the hive dry, and free from frost during our fluctuating winters.

In connection with this subject, I reluctantly express the belief, that the great mortality of bees in our Northern States, is owing in part to the management in winter. Your bee-raisers have been reared and educated in the belief of a bee-house, or a bee-cellar, as a necessity to bee-keeping in winter. Now, a man in this latitude "can't see it." I don't believe it is the better plan. Moderate weather does sometimes supervene in your country, and bees should have free access to the air to disgorge their overloaded fæcal organs; their instinct impels a quick return to the hive. Where they are in a torpor from cold, the secretive functions are sluggish, and the bees will bear a long confinement. Look at nature. Where bees are found in the woods, if the entrance to the cavity is above the combs and broodnest, they have upward ventilation; if below the mass of bees, they sometimes perish from cold, while those in the former condition are strong and populous. Acting upon this principle years ago, I arranged some of my box hives on this plan, by giving an entrance 1¼ inches in cap of hive, and no entrance below. This was upward ventilation. Every warm day all the bees piled out on top, and I had to give a lower entrance for the summer. This aperture in the upper part of the hive only admitted upward ventilation, and the bees could not drive the air through the hive with their wings, as they do in low ventilation. As cold weather approached, I closed the lower and opened the upper entrance in the hive to accustom the bees to it, before winter, there being danger that they would return to the lower place, and perish from cold. In winter this acted like a charm, those colonies were active all the pleasant weather in winter, and in spring were the strongest, and swarmed first. There was a lesson taught by nature, and based in philosophy.

Now, Mr. Editor, will you experiment on one of your strong colonies? Do thus: Bore an inch auger-hole near one corner, through the cap, quilt, and sections, to give a free access of air to the bees; close every aperture below in the fall, in time to teach the bees the way to upper entrance, so that no bees are lost by going to lower place, where they fly. Leave the hive on the summer stand with shelter to keep ants, rain, and snow from the entrance. All these conditions complied with, if you lose the hive send me bill for damages, and I will pay. The basis of wintering bees in your country is upward ventilation and summer stands I verily believe.

Council Bend, Ark. GEO. B. PETERS.

Friend P., your idea about closing the summer entrance entirely, and having a winter entrance, is by no means new, for it is given in Mr. Langstroth's book, one of the oldest editions; but if I am correct, Mr. L. afterward abandoned it. Friend Hill, of Mt. Healthy, O., who has had such wonderful success in wintering, used to close the lower entrance, and give only an upper one, and he may do it yet for aught I know. His plan of preparing his hives for winter was given in our back volumes, with a cut of the plan of his apiary. Will friend Langstroth please tell us about upper winter entrances? To be sure, I will try a hive as you say, friend Peters. By taking the wire cloth from the ventilating holes in the chaff-hive cover, we have an excellent winter entrance. And a hole through the center of the enameled sheet, with the rest all waxed up tight, would be just about the thing, as it seems to me. If the upper story were then filled with forest leaves, it seems to me we should have just about the thing. I have wintered hives in something this way, and the hole through the honey, bored right over the cluster, would be filled with live bees looking as happy and contented as could be, even during zero winter weather. If a chance comes for them to take a fly, no dead bees can clog their entrance, and snow would be likely to impede their egress on the outside. Why, what is to hinder having a chaff hive without any entrance at all, except up through the cover, as I have mentioned? Only yesterday, during our great basswood yield, while opening hives the bees would come up and out at the top in great numbers, and sally off to the fields as if they enjoyed this short cut. Who will tell what is to hinder having a top entrance all the year round? Do you fear they could not drag out dead bees, etc.? Well, perhaps they would never have any to drag out. Who knows?

THE Cyprian queen, mentioned on another page, whose bees so tried the patience of the veteran bee-man, friend Hayhurst, is now in our own apiary. She came with a pound of bees, and I believe there was not a dead bee in the package. Friend H. knows how to ship bees, if he don't get along with Cyprians. The bees *are* a trifle excitable and fidgetty, but it is no very hard matter to handle them by following directions friend Benton has given in former numbers. If we had a colony of 8 or 10 lbs. of flying bees, of this stripe, very likely I should have my hands full (possibly hair, too), in trying to handle them. I am glad to be able to say, that *all* Cyprians do not have this peculiarity, for those we had last season were as gentle as any Italians we ever had in the yard. Those that went into the apiary of neighbor H. were more like Hayhurst's.

FRIEND BRITTON'S BEE-KEEPING.

AS NARRATED BY HIS BOY.

PAPA took the bee fever last year, and in July bought a colony of hybrids, which we divided. Then pa and I each bought a hive of Mr. Tomkins, who has mighty nice Italian bees. He also made papa a present of an Italian queen, which we put into one of our hybrid colonies.

MOVING BEES IN THE SAME YARD.

We had to move the two hybrid colonies to another part of the yard, to get them ready for winter. We moved both hives at the same time, moving them about a foot and a half to two feet every night. Was that right? or tell us, please, just how far to move at one time, and how often. We noticed when we moved the bees, that those in the last hive were fighting all the time. We first thought they were robbing; but it at last struck us that it was the bees from the first stand, trying to get into the second. We just let them alone, for we didn't know what to do. What ought we to have done? Consequently, when we got them where we wanted them, they were very weak. So we went into the winter with two weak hybrid hives and two strong Italian hives. I forgot to say, that papa and I went into partnership — I as one-fourth partner. We built a house all around the stands, filling in tightly with straw, and putting chaff bags on top. How far apart ought you put your hives for wintering?

When we opened them this spring, both hybrids were dead. One had plenty of stores, the other had none. Papa then bought two stands of black bees in place of those that died. We immediately got queen-cells from a friend whom we knew had pure bees; took the heads off the black queens, and put the cells in there, and also started a nucleus, right in the midst of the honey season. That was not right, was it? We got no honey from the black bees, but got about 120 lbs. of extracted honey from the two hives we got of Mr. Tomkins. The nucleus fills up nine frames now; the queen in it is the poorest of the three we raised. The other two filled up their hives with brood nicely. The brood is just hatching this last week, and they are just as pure as they can be.

I will tell you a few funny things now. When we first began looking at the bees, I thought I saw some capped brood, and told papa so; he said not, for he had just looked at them and it was capped honey. I said it was, and was told not to contradict my father — he *knew*. Well, one day we were looking at the hive together, and I said, "There! that is what I call capped brood."

He looked at it, and said no. I said I'd bet it was. He said he *knew*, and there was no use to say any thing more about it. Well, I took a pin and uncapped one and showed it to him, and sure enough, it *was* brood. He didn't say any thing, but I'll bet he felt cheap.

When we made our nucleus, we just put in a couple of frames from our strongest hive, and shook the bees off a couple more from the other hives, but never thought to look for the queen. Well, the next day we went to look into it, when we saw the queen-cell torn down. We looked around, and there was the queen. Oh, we felt cheap!

R. D. BRITTON.

Wyoming, Ham. Co., O., July 10, 1881.

Well, I declare, friend B., you have written a pretty good article. I hope you and your pa will always be "partners," not only in the bee business, but in every thing else; but I hope you will remember to speak to him and of him in a respectful way (because he *is* your father), even if he should be wrong and you right.—Moving bees one foot a day, or about that, is very apt to bring about just such differences as you describe; and, in fact, it is a pretty bad plan to move bees about in the same apiary, any way you can fix it. Put them where you want them, and there let them stay.—I presume you both know capped brood from capped honey now, without resorting to picking it open with a pin.—You probably know, too, by experience, that it is best to find the old queens before you take bees from a hive to make a nucleus.

BEE CULTURE IN TEXAS.

CHAFF PACKING IN THE SOUTH, AGAIN.

I CLAIM to be the first man to introduce the movable-frame hive in this part of Texas, years ago, and have had the care of bees twenty-two years; yet I am only an A B C scholar in the bee "biz." As formerly stated, I wintered 23 colonies; one died — starved. I had two black colonies which I did not count with the rest, unprotected during the winter. they dwindled badly, but have been built up to half-colonies, and heads are now off the queens; the Cyprian queens have been in the hives just 28 days to-day, and things are quite different with hive full of young bees. Let us go back and say, we live 200 miles nearer the north pole than our Austin brother. We had several zero spells; snow-storms, eight or ten; ice five inches thick. I had a nice swarm the 25th of March, and bees were doing well; but about 1st of April they began slaying their drones, and in five days not a drone was left, inside or outside, in cell or anywhere else. Capped queen-cells were torn down, queens stopped laying, not a drop of honey to be had in the fields, with every hive full to overflowing with bees; honey rapidly disappears from the hives, and I am compelled to feed a little to keep out of Blasted Hopes. About the 10th of April the willows bloomed; on the 13th, in full bloom. The joyous hum was again heard, and the bees fairly poured out and in; farmers are busy plowing corn and planting cotton. What is that yonder in the north? A cold "blizzard." It comes at the rate of 35 miles per hour, ice cold. I walk down to the willow pond and find at least 15 lbs. or more of bees hanging to the willows, stiff with cold. These pass away like my peaches, apples, and other fruit, to enrich mother earth. For the next ten days I thought I would give it up; but $3.00 worth of sugar brings them up to prickly ash and ratan bloom. April 24th to first week in May I had to use the extractor to give the queen room. I sold 3 colonies for $27.50, and had just twenty, all told, left, including the March swarm to begin. May 1st I commenced to raise my queens, and had good luck. I now have 40 full colonies, six nuclei with queens; sold 8 queens, two tested (raised 1880), and have on hand 1000 lbs. of mint honey, and still the flow continues. I attribute my success to my winter protection, as I did not remove the packing until the middle of April, and some hives until May. I kept my hives full of bees all the time. I have one colony which I have divided six times, and it is now full. I will tell you how I increase so fast. I put full stories over strong stocks, and give them fdn.; in two days this is drawn out ready for the queens to lay. I now divide upper and lower stories equally, making two hives, having the old hive on the same stand. I now go to my two-frame nucleus, and get a queen, and just let her crawl right into the queenless hive; in a few minutes I look through to see if the queen is all right. I have lost only one out of 20 or more, and I save by this plan, in one month, on 20 colonies, about 5 good strong colonies. If you buy your queens you had better not do this, or you might lose your dollar.

If horsemint will do as well as it has this year, and could only last a couple of weeks longer, we could all have honey. As I have received many letters in regard to this State for honey, I will say, portions of it can not be beat. On Chambers' Creek, in Ellis Co., bees do well nearly every year. Plenty of basswood in Leon, Houston, Henderson, and nearly all the eastern counties. I had a pleasant visit from Dan'l Keepler, Napoleon, O., not long since.

B. F. CARROLL.

Dresden, Tex., June 10, 1881.

TRIALS IN QUEEN-REARING.

FRIEND NOVICE:—I am having so many strange freaks in queen-rearing, that I have concluded to report, and ask if others are having such fun. Mrs. L. Harrison writes me for queens, and says, "Something is taking my young queens when they fly out to mate." I have had so much of this kind of "biz," that it is worrying me. I lost 5 out of 7 in the fore part of the last week in June, and have lost such a large per cent in this way, that I dare not promise queens until I have them laying. Have lost two in succession from different nuclei. This cuts a "feller's" nose off pretty fast, as he can test a queen while he is getting one mated. Where my heaviest losses occur, the nuclei are from 12 to 20 feet apart, some facing east, some west, and some south.

Two days ago I opened a hive containing a cell, and found a young queen in a ball of bees. As soon as released she flew and alighted in the hive again. There was but one young queen in that part of the yard, and thinking she had come out and made a mistake in going back, I carried her to her supposed hive and released her again. She flew, and was seen no more. Further examinations showed that no queen was missing. Where did she come from?

A colony cast a swarm. The next day, I took a laying queen and dropped her in the old hive; but the bees did not treat her just right, so I put her in a small cage and left her. Next day, I tore down the cells and tried her again; but the bees did not act right, so I put her in a Peet cage, on a comb, and waited another day, when I found her in the cage with quite a number of bees; but all was quiet. I loosed the cage a little and shut up the hive. The same day that I took her from the nucleus I put a hatching cell in her place, and the young queen was accepted. The next morning, after looking at the queen in the cage, I saw the young queen and several bees, all dead at the entrance of the nucleus. Looking for the cause, I found the old lady there as quiet as if nothing had been going on.

I have one colony with two queens—a mother and daughter. The old lady is not doing a very big business; perhaps 24 eggs per day. We have had too much rain for a good honey yield. Basswood is over, and but little honey from it. Bees are gaining but little now, as clover is past its heaviest bloom.

S. A. SHUCK.

Bryant, Fulton Co., Ill., July 12, 1881.

There may be king-birds or bee-martins that take off your queens, friend S.; but I hardly think there is any thing amiss so bad as that. Once in awhile our queens seem to get lost badly, and again every thing will go on all right, and almost none will be lost. Stick to it, and be assured you will get the upper hand of the difficulties eventually. It is always a little risky, moving a queen from one hive to another in the same apiary. They often step out and go home.

WINTERING WITHOUT POLLEN.

FRIEND LANE'S IDEAS ON THE MATTER.

I DO not think, after all the reports that we have from veterans and all, that we have found the road to successful wintering; but I think that we are approaching it. I have been experimenting on a *small* scale for the three past winters. I will say right here that I always pack my bees in chaff on summer stands (the more chaff the better.) I find that the bees usually store more pollen around the last brood in the fall (if they can get it) than at any other season, filling the cells three-fourths full, finishing with honey when the brood has hatched and cold weather approaches; they use this empty space to cluster on, uncapping and using the honey; by the second week in January they have this all uncapped; about this time the queen commences to lay. If the winter is mild, the bees will use all this uncapped pollen to start brood-rearing; if very cold, they have to consume it themselves; the result is sickness and death, and the colder and damper the interior of the hive, the more fatal the sickness. The plan is, remove those pollen sheets and replace them with solid combs of honey (I prefer buckwheat and blackheart honey for this purpose.)

In the spring, say as soon as bees will work on flour in the open air, give them a comb containing an abundance of pollen on each side of cluster, and note the result of this plan of wintering. Friends, please try a few colonies this winter on the above plan, and report the result. My opinion is, that this is the long-looked-for secret in wintering bees.

S. H. LANE.

Whitestown, Boone Co., Indiana, July 15, 1881.

OUR friend D. A. Jones reports, in the *A. B. J.* for July 13th, that his losses during the past winter were comparatively small. As nearly as I can get at it, he had between six and seven hundred colonies.

APIS DORSATA FOUND AT LAST.

IN the same No. of the *A. B. J.* mentioned above, we have a letter of almost romantic, thrilling interest, detailing how friend Benton has at last found and captured swarms of Apis dorsata. Were it not for its length, I should like to give it. He does not at present report favorably in regard to them as honey-gatherers. Strangely enough, the *Youth's Companion* for July 14th also gives an account of the methods of capturing Apis dorsata, with an engraving of the way in which the natives hunt and capture them, mainly for the wax, throwing the honey away. This was as far back as in 1857. Both descriptions of the way the bees build on limbs, etc., agree substantially.

UNFAIRNESS.

ILLUSTRATED BY "LITTLE STORIES."

THE following is from the *Bee-Keeper's Guide*, of July. Friend Hill, as you observe, begins by copying a paragraph from our price list.

> If you purchase only half a pound of bees with your queen and turn them loose on one or two of your brood combs, when received, you have a fair, working colony at once, and the queen will go right to laying; for we put them up so that she ordinarily keeps laying on the way, or during transit. Perhaps one-fourth of all the queens sold are lost in introducing; and, with the A B C class, I do not know but it sometimes amounts to nearly half. With a pound of bees, this loss is entirely done away.

The preceding statement was made some time ago by the editor of *Gleanings*. Queens are caged during their introduction from twenty-four to forty-eight hours and then released among the bees. Since this is the process to be gone through each time an introduction is made, we can see no reason why the bees will not accept a queen as readily from the hands of a beginner as from a veteran bee-keeper.

We never had any bees that would show any respect for our years of experience. We do not remember of ever possessing any with such proper feelings. We liberate the queens, close the hive, and seldom lose one.

We have a boy who does errands for us who knows nothing about bees, and we let him release several queens just to see if we have any supernatural power, but I guess we haven't, for they got through all right.

That old bee-keepers lose one-fourth of the queens they introduce is a monstrous statement. That beginners lose one-half is an outrageous one. Had Mr. Root said one-third it would have been tremendous; had he said one-fourth, experts would not have believed it; had he said one-fifth, the statement would have been incorrect. Usually such statements are not made without an object, and very likely the object here is to scare unsophisticated bee-keepers into buying a pound of bees with each queen. This would not be so terrible were it not that he charges, for a fact, $2 per pound for his bees. This is at the rate of from ten to twelve dollars per swarm, without queen, combs, and hive (first swarms weigh from four to six pounds.)

We can think of only one other case of equal unfairness: This is related by Mark Twain, while traveling in California. The incident occurred in the mines of a wealthy mining company. A hole was drilled deep into the rocks and a laborer had put in a charge of powder. As he was ramming the wadding down with a crowbar, the charge exploded and the man was seen going up with his crowbar, becoming a mere speck in the sky and then disappearing from sight. In a few moments, however, he came into view, and returning, lit on the identical spot, resuming his labor where he left off, apparently as if nothing had happened. The foreman reported the case to the company directors, and after due deliberation, they decided to dock the man for the time he was gone.

Now, my friends, I want to tell a little story too. A boy was once viewing with much pleasure some pretty birds that were sporting at a little distance from the house, and in his eagerness to have one for his own, he appealed to his father, who sat by, to know if it were possible to catch them.

"Oh, yes!" said his father; "it is the easiest thing in the world. Just go, get a handful of salt, and put a little salt on each bird's tail, and it will be just as tame as can be."

"Why, is that so, father?" exclaimed the boy, and, full of confidence in his father's word, he rushed for the salt-barrel, got a handful, and started for the birds. As he ran, however, he all at once began to slacken his pace, and, finally wheeling around, he came back, and once more standing by his father, with a frankness and honesty that was touching, said,—

"O father! won't you do it? Please, you do it; here is the salt."

Friend Hill, you have spoken unkindly of my way of doing. Now, "won't you do it?" Here is the salt, in the shape of a free advertisement, and all you will have to do is just to supply the demand for bees at a fair, honest price. You of course know what that price should be. Send the bees off promptly, even if it is the ruin of your colonies; if they are received dead, send them again, and give satisfaction to your customers, and I shall be most happy to give you all the trade. Again, friend H., can your boy introduce 27 queens in an hour, so they will be filling the combs with eggs in a few hours afterward, as I told you of doing in in this No.? You are well aware of the magnitude of our business in queens and bees, I suppose, friend H.; and I suppose, too, that you know the people will send orders to us, when plenty of other advertisers offer the same things at very much lower prices. Bees have been offered in GLEANINGS at one-half or less what I charge, and I inserted these advertisements free of charge too. Shall I tell why they do not get trade? It is no secret; it is simply because they do not fill the orders they get, promptly and carefully; and when troubles and misunderstandings come, they quarrel with their customers, and sometimes call them hard names. I have prayed God to send me orders; and when they came, I received them as a sacred gift from him. I have tried, too, to treat his messengers kindly who brought these answers to prayer. Friend Hill, if I have not prayed for you before, and for the success of your bee journal, I pray for it now. I pray, too, that God may guard all the bee journals from unkind criticisms against each other, or any thing that may set a bad example before those who are looking to us for instruction.

DEATH FROM A BEE-STING.

I INCLOSE an article which attracted my notice this morning, and I send it for your consideration and comments in a subsequent number of GLEANINGS, if you feel inclined.

FRANK J. BELL.

Moosehead, Luzerne Co., Pa., June 27, 1881.

DEATH FROM THE STING OF A BEE.

RICHMOND, Va., June 25.—Last evening, while Mr James Young was examining a new bee-hive belonging to his father-in-law, the Rev. P. C. Henkle, in Conover, he was stung on the back of his neck by a bee which got behind his collar. His neck swelled rapidly, and the poison seemed to extend all over his body, swelling it greatly. Last night he became delirious, and so continued until this evening, when he died. The symptoms were said to be like those resulting from a rattlesnake's bite. The physicians assert this is the first case of death from the sting of a bee. Mr. Young was a man of powerful physique.

The physicans are mistaken in thinking this is the first case of death resulting from bee-stings. There are quite a number of them on record. In making this statement, I hope no one will be frightened, for we are to bear in mind, that, although great numbers of people are killed almost constantly by the use of horses, no one, so far as I know, has ever thought of discarding them as domestic animals, on that account. Most cases of bee-stings result from suffocation caused by the swelling. Perhaps many lives might have been saved had the friends kept open the breathing-passage to the windpipe, by mechanical means. I would suggest the use of the handle of a silver spoon for this purpose, or, perhaps, two spoons used in the same way. The swelling usually goes down in a short time. Can our medical friends suggest any thing better to be done, where the breath threatens to be stopped?

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

THERE is a man here claiming to have a patent on the N. C. Mitchell adjustable bee-hive. He claims that no other person has the right to use any division-board except by buying a farm right. Is it so, or is it not so? L. E. MILLER.

Honey Grove, Fannin Co., Tex., May 16, 1881.

Had you read GLEANINGS; friend M., you would have known this is an old, *old swindle*. Mitchell has been for years published as a humbug.

I sent N. C. Mitchell, of Indianapolis, Ind., an order and five dollars for one of his Italian queen bees, model hive, farm right, etc. It has been two months, and he has not sent me the bee yet. As he knows so much about you, I guess you know some thing of him. Please let me know what you think of him. I expect to patronize you soon, as N. C. Mitchell will not do. M. C. DORMON.

Williamsville, S. C , July 2, 1881.

I told our readers, years ago, that money sent Mitchell was, as far as I knew, like pouring water into a tunnel. It was gone, the minute it was out of your hands. I am sorry to say he is in the "tunnel business" still, judging by the reports we have given almost monthly, of those who have sent him money.

Two years ago I happened to get hold of some of N. C. Mitchell's writings. I thought he was just the man I wanted. He claimed to be a heavy dealer in Italian bees; so myself and a neighbor concluded to send for the Italian bees, because we wanted them badly. So we sent an order of $26.00, and never received a single bee, nor do we ever expect to. This is the way I have been robbed by N. C. Mitchell, of Indianapolis, Indiana. PETER SHOEMAKER.

Cochranton, Crawford Co , Pa . June 10, 1881.

Mitchell's customers curse him loud and strong. One of the queens I order is for a man his agent "sold." CASPER KETTERING.

Apollo, Pa., June 22, 1881.

STARTERS FULL SIZE OF THE HONEY BOXES, ETC.

MY bees commenced swarming on the 1st of this month. The honey flow has been good; some hives have stored as much as 50 lbs. since the middle of April, chiefly from honey-dew, red clover, and hoarhound. The latter I consider a splendid honey-plant. It commences to bloom about the middle of May, and with favorable weather will continue until frost. If I were making bee-keeping a specialty (which I may do some day), I would plant a piece of ground with it; however, I would not advise farmers to get it on their place, as the burrs get in the wool of sheep. It will grow on almost any ground; but it is hard to eradicate from the soil, as it completely takes possession of it.

My experience is that it don't pay to use starters much less than full size for boxes. Last year I did not get one section out of 300 full enough for sale; starters were about 1½ inches wide. This year, having a lot of 70 combs, I thought that I would try another plan. Last year I had the top story filled with sections. I put 7 combs and two frames of sections below, and four combs and four sections above. You see, I was intent on having the honey one way or the other. One swarm put most of the honey in sections; the other in the frames. I hived one colony in a chaff hive, and on the 1st day of June gave them four combs below and four frames of sections, one of which contained some comb; also another contained a starter almost full size. Now, the bees filled the one containing the comb on one side; and on the other side they passed right by the one containing narrow starters, to the outside one containing starters full size. On examining them a few days afterward, I found the other two frames entirely neglected, so I got more frames of sections, took out the narrow starters, and put in nearly full-sized ones, lacking but ½ inch of touching the bottom. I raised the two filled sections, placed them in the middle of the hive, the other on each side, and put three more empty combs below. At this date they are working on about 40 sections. All of this fdn. is of your make, one year old. H. T. HAGEN.

DeSoto, Jefferson Co., Mo., June 12, 1881.

Bee Botany,

OR HONEY PLANTS TO BE NAMED.

ILEX DAHOON.

I SEND, by to-day's mail, a small package of flowers, twigs, and leaves, of a tree that grows here on the limestone glades. It grows about 20 or 30 feet high, and blooms about the first of July, generally, or about the time white clover is out of bloom. It must be a splendid honey-bush, for the bees work on it from daylight till dark. They call it gimlet-handle wood here. Please give the right name. You will see that the flowers are not in full bloom yet. It lasts, generally, about two weeks or a little longer. AUG. GRIFFITH.

St. Mary, St. Gen. Co., Mo., June 19, 1881.

The leaf of this tree is much like the apple; but the blossom-buds are little round balls not much larger than pinheads, and they are clustered so closely right where the leaves started out, that I was tempted to think them eggs of insects. Prof. Beal's reply below, however, settles the matter.

This is *Ilex Dahoon*, Walt., a species of holly. The books give no common name. W. J. BEAL.

Agricultural College, Lansing, Mich.

WHY DID THEY DIE?

BY JAMES HEDDON.

"Come, let us reason together."

THIS case of last winter's depredations is one of such vast importance and interest to us, that it will never come off the docket till the fate of next winter *crowds* it off. The reports of last season's successes and failures bear me out, at least to a great extent, in my preconceived notions as to why our bees die during winter.

For some few years back I have felt *sure* that the principal trouble was in the food, and so I wrote upon the subject. Now I wish to appeal directly to the reason of each reader, and ask him this question: Is it not fair to suppose that this disastrous result, whose phenomena are so universally alike, is caused by one and the same thing? What proportion of colonies in apiaries generally, do you suppose, would die during winter if there was no such a disease or effect as what we know by the name of bee dysentery? Now, the worthy object of each scientific searcher is to find the *cause* of this malady. I have declared that my experience and observation forced me to believe that the cause is in the food, in the form of an over-amount of animal or vegetable matter. I thought that perhaps it might be animal (bacterious), and threw out the hypothesis, to see what might come out of a philosophical if not a mechanical research into the theory. I always said I did not *know* that any such micrococus existed; I never said I really and fully believed it; but that, in our infinite ignorance, why not guess at a cause, and then base our experiments upon that guess? I could see no other way to get hold of the case. We were forced to commence at the outside, and work in to a center. I considered that bacterious guess as the only one that would cover all the cases that had come within my knowledge, and consequently a good point to commence work at. Last winter, all of nine-tenths of the colonies of this whole region failed to survive the period of confinement. Of my own 196 colonies, I was presented with 122 subjects for post-mortem examination. I improved the opportunity to the best of my ability, and have only just closed the work; and for the first time since I have kept bees *I am now satisfied as to the cause of bee dysentery.* What I suspected as the possible cause (as referred to on page 272 of June GLEANINGS), I now fully believe to be POLLEN. My former suspicions, that the trouble was wrapped up in the food, were correct; but that it is in the honey I now do not believe. I place it in the adjoining cell, in the form of bee-bread. Upon this rock I shall stand, until forced by further proof to step down and off. I believe that all the results that have been made known, either by observation, experience, or report, can be accounted for upon the pollen theory. The kind of bee-bread, the amount, the quality of the honey, and consequent greater or less preference for it over bee-bread; the hardiness of either during our protracted cold spells, when the bees can move about but little to choose which they will feed upon, and, in fact, all conditions that cause the bees to consume bread instead of honey, will account for the vastly different results that we experience, observe, and read about in different seasons and localities.

I am of the opinion, that any process that will cause the bees to feed upon *any* honey that they may have in the hive, to the total avoidance of the bee-bread, will be the "open sesame" to success in wintering. I deem all the talk about "dampness," "fall honey," "ventilation," "holes through the combs," etc., as having only a slight bearing upon the cause at best, and a tendency to lead our minds from the *real* cause. I can think of no greater sin than intentionally leading astray those of less experience; so when we *think* that some one is being misled, however honestly so, it becomes a duty to put in our mite in what we *believe* the right direction, as viewed from our standpoint, whether the future should bear us out or not; and so the discussion goes on. These discussions are not only of profit, but pleasure, because it is his argument, and not the man, that we combat.

Our old friend and benefactor, Langstroth, has given his views upon our recent disasters, and I am compelled to say that my experience does not corroborate his conclusions. In regard to "spreading the combs," I supposed that the distance we placed our frames apart was taken from nature. I never discovered that combs in box hives were further apart than those in the Standard L. hive, except some drone pieces sometimes found in the extreme corners. But however that may be, I am unwilling to recognize box hives or hollows in trees to be our standard of successful wintering. This same dysentery cleans out trees and box hives wholesale, whenever it visits us in its severity. Mr. Ferry had one left alive out of 85; Mr. Jenkins 1 out of 65; all in box hives. I doubt not but holes in the combs would serve the purpose of giving the bees a better choice in food, and prove an adjunct to success; but as long as these holes of all sorts (tin-lined) have long been advocated, owing to the impracticability of the process, they are hardly ever used.

I accomplish what I believe to be the same result, and more completely, too, in the following manner. I put two little bows, thus: ⌒ over the top of the hive, and the quilt and packing over them, and this 2-inch space gives the cluster a fine chance to work down between any of their 8 ranges of combs and honey, in the shallow 8-frame L. hives. We know that colonies fed with sugar are more apt to survive. My idea is, that its superior sweetness, and addition to the amount of honey compared to the amount of bee-bread, induces the bees to partake of it only to the avoidance of the bread, as a rule. We know of cases, however, where stocks have died with the malady, fed all their liquid stores of sugar syrup. I believe that if, in addition to this, all bread had been removed, success would have been realized.

Now, I do not wish to be understood as ignoring most of the modern appliances for the safer wintering of bees. Packing in boxes is good. Cellaring is good (some winters one is safer, and in others the other plan;) absorbents are also an aid; but that young bees, over-grown colonies, high board fences, the way the hive faces, and a dozen other such contrivances, are causes, or even potent adjuncts, to success, experience does not bear us out in believing.

I have just read the article of Mr. Grimm, "one who does winter bees." His first admonition, to supply each full colony with at least 2 five-pound combs of thick sealed honey ("if they need it"), would likely prove a great advantage to all well bee-breaded colonies. These combs would be filled with honey to the exclusion of bread. I suppose he would consider that they needed it, provided they were light of honey, while I would see the greatest need, if the colonies were heavy with bread. I believe, however, that if colonies are well supplied with honey, and the packing so arranged that the stores are easy of access (thus allowing a choice between honey and bread), and the whole protected against extreme cold, to take the chances, is, in the long run, the greatest economy. If they lack in honey, sugar syrup, properly prepared, or a mixture of syrup and honey from a voluminous feeder, is my preference for supplying the same. I find it neither profitable nor pleasurable to open hives, or do aught that will excite bees to robbing, at any time when it can possibly be avoided. The opening of hives to insert combs will; the use of a good feeder will not. The superseding of old queens by younger ones, I consider of no importance at this time of year. The less breeding the less bread is manipulated, and the less dysentery is the result. The cheapest and best way that a bee-keeper ever produced queens for his own use is in full colonies, very little varied from the plan of the old farmer, who lets the bees do it all themselves.

I favor the late removal to the repository. In regard to the proper temperature, I have found that, in the same cellar, with all the conditions the same, *as far as we can detect*, that in one winter my bees would remain most quiet at 42°, while in another at 34°. A change of 2 to 4° either way from these points in either of the respective winters would cause the bees to "scold." *Why*, I can not tell; but I firmly believe the best temperature in each case was the one in which the bees kept most quiet. The description of Mr. G.'s cellar is interesting, and it strikes me as a good cellar.

The way to keep the temperature down in a warm spell, is to put but 40 or 50 colonies in this cellar. Yes, I know that that makes more expensive housing, but that leaves the facts regarding the temperature the same. I heartily agree with Mr. G. in regard to carrying out our bees to fly at once, and not in the night, etc., as advocated by some writers. I would add two points left out by him, and they are these: Place your colonies in their respective places in the cellar or house *so quietly they will not know of any removal*. Instead of upward ventilation through open holes, place at least a light packing over the bees, the same as outdoors, only uncovered. Do not forget that bees can not pass the combs and spaces for a free choice in stores, in a temperature of 42°, unless the space over the frames above referred to is given. I am glad that Mr. G. has read with confidence the disastrous reports of those who were prepared equally well with himself, which I infer from his remarks twice, "except the bees are sick with the dysentery." I very well know that all these precautions, yes, even more and better perfected, will prove utterly futile in some localities during some winters. That Mr. G., and his father before him, have an exceptional locality for freedom from dysentery, and for candied honey, has been my opinion for years. I have no doubt but that such a winter as last one would in its severity drive bees to dysentery, while those well housed would have it but little or none. This disease rages to such an extent in some places during certain periods, that all precautions and favorable conditions that the master can command, prove of no benefit. Again, I have known cases where bees have been misused in every conceivable way, and die they would not. No dysentery, success; dysentery, no success. What is the cause of the disease, and how can we best and most cheaply remove that cause? JAMES HEDDON.

Dowagiac, Mich., July 11, 1881.

While I am strongly of the opinion that bees will winter better without pollen, and without raising any brood, I am hardly as yet prepared to take the very strong ground of friend H., that pollen causes all the trouble. I have seen bees winter most beautifully where they had new light combs, with scarcely a trace of pollen. An old box-hive bee-man once told me it was pollen and pollen alone that made bees spot their hives in spring. The matter will be, most likely, thoroughly tested next winter and spring.

HORSEMINT IN TEXAS, ETC.

We have just passed through a bountiful harvest of honey from horsemint, our great honey-plant. This plant begins to bloom the last week of April, and in order to obtain the full benefit of this choice crop, every colony must be strong, and in fine working trim by the 1st day of May *sharp*. Bees work on this bloom about five weeks, and they do a rushing business. It is a delicious honey, of light amber color, and of a pleasant aromatic flavor. The plant grows in great profusion in this county, and *never fails*. Our bees do but little during the months of July and August, it being generally too dry and hot. We had but few swarms this spring. We expect to reap a rich reward from our bees next season. We have nothing to fear in wintering. Keep each colony strong with plenty of stores, and they will come through all right without any protection whatever. It is of paramount importance to have a theoretical knowledge of bee-keeping, and this can be obtained only by a thorough perusal of the several excellent books on apiculture, now well known to the fraternity. But this is not altogether sufficient to make one *practically* expert. The advantages of each locality must be well noted, and as we are all of the A B C class here as regards scientific apiculture, it is important to us as beginners that we should have a record of the apiary in which we should record the monthly work in the apiary, as well as to note the honey-plants of each month. I have adopted this method, and next season I will have this valuable aid for reference. I find this to be essential in order to avail ourselves of all the advantages in obtaining the entire honey crop. For our locality, empty hives, frames of *wired fdn.* (which are always best in this climate), must be in readiness by the 1st of March; the swarming or dividing *must* be done with by the 15th of April; supers of wired fdn. for extracted, or sections with starters of fdn., or nice comb for comb honey, *must* be put on by the 1st of May. I purpose running my apiary for extracted honey, because I think it will pay better in this locality. We expect a light crop of honey in the fall, if not too rainy. When dry, the live-oak balls are said to yield quite a quantity of fine honey. We have the morning-glory (*convolvulus minor*), which is a good fall bloom. I shall discard the black race next year. The Italians have proven vastly superior, for many reasons I will not now mention. I shall procure for trial the Cyprian and Syrian races also, this being about the same latitude of their native home. My opinion is, that they will prove an invaluable acquisition. J. E. LAY, M. D.

Halletsville, Texas, July 9, 1881.

Heads of Grain,

From Different Fields.

HONEY FROM WILLOW ROOTS.

NO bees here, and very few in the State. A few swarms near Canon City, on the Arkansas River, are said to have done tolerably well. One man, A. Pickerell, who, at my suggestion, subscribed for GLEANINGS, and who lived at Beulah, in Pueblo Co., had about 40 swarms of Italians in the fall of 1879; but they all died with dysentery before spring. He thought it was caused by some unhealthful juice they got in the fall from the roots of willows growing on the banks of the St. Charles Creek. He lived on the bank of one branch of that little stream. W. M. SPALDING.

Gunnison, Col., June 8, 1881.

Well, I declare, friend S., that is a queer idea of honey from roots. How did they get at the roots, and where did the juice come from? I wish your friend would enlighten us a little.

CLOSED-TOP FRAMES.

I am keeping bees in a hive made in such a way that the frames of it are made to rest touching each other so that the bees are considerably jarred in taking them out. Will you please inform me whether it is the fault of the frames in this respect that makes my bees so ugly, they being handled in other respects all right? Upon taking out a frame from this hive they fly all over me. The bees are partly Holy-Land (or Cyprian), I don't know which, and Italian, with an Italian queen. I have a Nellis hive with Italian bees, with which I have no trouble in opening. C. A. WOOD.

Tarrytown, N. Y., June 20, 1881.

It is my opinion, friend W., that the closed-top frames will not work very well with Holy-Land bees. With the constant handling we are obliged to give our combs in queen-rearing, we want the frames to touch nothing, as nearly as it can be secured. Where hives are worked only for comb honey, closed-top frames have some advantages. It may be well to remark, that the metal corners seem to be coming more and more into favor each year. By far the greater part of all the frames we now sell are of this kind. With the Holy-Land bees, when no honey is coming, it is of the greatest importance that they be handled without jars or knocks.

ROBBING WHEN FIRST SET OUT.

I had 1 poor and 12 good colonies this spring. Pretty soon it was 10 live ones only and then down to 5; and what made them dwindle so is hard to tell, unless it was robbing. I set them out one warm day about noon, and such another mess—a regular free fight, and then to robbing, and they would rob in spite of me. I contracted the entrances, and shut some of them up for four days, and then they would rob.

CAN A BEE EXTRACT THE STING IF LEFT ALONE?

We know how many bees will get their sting out if left alone when they sting. I have had one, and that is all, and I think that I have tried it fifty times, but did not keep count, but wish I had so as to be sure. C. H. ANGELL.

Clarksville, Tenn., June 25, 1881.

If I am correct, friend A., there is some thing wrong when bees rob at such a rate in the early spring. If I mistake not, friend Grimm, with his hundreds of colonies, has no such troubles, and the only reason I can give is, that each one is so strong and full of bees it can not well be robbed. The Italian or foreign bees seldom allow any such work. I hardly think I should prove martyr enough to let them sting me fifty times, friend A., even in the pursuit of science.

WHAT A POUND OF BEES WILL DO.

I purchased of you 1 lb. of bees and queen, which came to hand the 15th of last October. They have increased to 4—first swarm, May 17th, about half a bushel of bees; at any rate, they filled a ten-frame hive in 6 days, and commenced storing in the boxes. I have 2 hives of blacks, very strong in bees—have not swarmed. I had 3 colonies last fall, including your dollar queen, which proves to be pure Italian. I wintered on summer stands in chaff hives without loss. NOAH DEATON.

Carthage, Moore Co., N. C., June 22, 1881.

My friends, you can get a little glimpse from the above of what the trade in pounds of bees is destined to amount to.

SUPERIORITY OF SUGAR OVER NATURAL STORES FOR WINTER SUPPLIES.

As we have passed through the worst winter and spring for bees that have happened for years, the question arises as to the cause. Three yards last fall came under my observation, and as I assisted in putting them in the cellar, I will give a brief report as to their condition as they went in, and dates. One lot of 160 was taken in Nov. 16th and 17th. This lot was not fed, and had natural stores to pass through an ordinary winter. They were removed from the cellar April 9th, about 100, which dwindled down to 40 by the 9th of May.

Lot No. 2 was put in cellar Nov. 22d, was dug out of the snow, and was filled with frost; taken out April 22d, and out of 170, lost 10, and the rest were in good condition. They were fed up late on best granulated sugar, which, when put in, was not sealed.

Lot No. 3 was put into the cellar Dec. 7, and taken out about April 20th. This was a small lot of 20 in large hives, and very heavy with honey; in fact, so heavy that it was necessary for two to carry them. Losses, one, and the rest in first-class condition. All these lots were put into very dry cellars, which have been proven by successful wintering heretofore. I think if we had taken all of the honey away last fall, and fed sugar, best granulated, we would not have had the losses we now have. I hope some of our successful bee-keepers will agitate this question of proper food for successful wintering, along with the rest of theories advanced.

CHAS. G. FERRIS.

Mohawk, N. Y., July 3, 1881.

HOW AN A B C SCHOLAR SUCCEEDS.

I have kept bees for the last 13 years in box hives. Last winter I lost 12 out of 15, and now I have 4 colonies, all in movable-frame hives, manufactured by John Smith, of Morpeth, to whom I am indebted for adopting the new plan (to me at least) of handling bees. I transferred them myself, and was surprised to find that it was so easily done, and now I handle them every day. I have made a smoker, which answers every purpose, and I am bound to know more of the business before summer is gone.

MORRIS W. GRANT.

Guild, Kent Co., Ontario, June 22, 1881.

DOLLAR QUEENS DURING A POOR SEASON.

While writing this order I had to stop and hive a nice swarm of Italians, the third so far. I have now 14 swarms, which makes me more work than I like, as I have to work ten hours in the shop. I wintered in my cellar with but little loss. I got 393 lbs. of honey, mostly extracted, last season. They call it a poor locality, and a very poor season, and only ten swarms. Two swarms gave us 80 lbs. each. One is a dollar queen I had of you; the other is her daughter, and just as good as her mother. We think it the best strain around here. But few bees around here; nearly all winter-killed.

GUY CLARK.

Bellows Falls, Vt., June 15, 1881.

BEES GOING TWO MILES TO PREPARE A HIVE, BEFORE SWARMING.

In the spring of 1879 we commenced bee-keeping with 2 colonies of Italians in the American hive. We increased 6, but got not much surplus. The first swarm came out May 13th; but as we tried to hive them they clustered beneath the hive, and soon they rose again and went straight across the hills and woods about two miles into an empty hive of D. Kern, and the old man told us they had been cleaning out the hive for several days before.

CHAS. H. BRUNNER.

Zionsville, Lehigh Co., Pa., June 22, 1881.

Your report is indeed wonderful, friend B.; but I think you will find, as a reason for their going so far, that they found better pasturage at the new location. We once had a swarm go a mile without clustering at all, but their new home was right near an immense clover-field, where our bees were almost all at work daily. They appreciated the advantage of a saving of steps (or wings rather), and therefore "moved."

BEES IN THE OPEN AIR, AGAIN.

There is a curiosity in the way of bees within about three miles from here. About a month ago a fair-sized swarm of bees settled on the body of an elm-tree, and have quietly settled down to business. They have several cards of comb attached to the outside of the tree, and are working away, apparently as well satisfied as if they were in a hive. I shall watch them with some interest. Two years ago, a swarm took up their lodgings in a bois-d'arc hedge, and built several cards of comb on the under side of the limbs. Some of them I should judge to be 15 inches deep by 11 or 12 horizontal; but about Christmas a fire got into the hedge and destroyed them.

J. K. MAYO.

Stafford, Fort Bend Co., Texas, June 17, 1881.

Almost equal to the Apis dorsata, was it not, friend M.?

BAD HONEY.

I have about half a barrel of honey from my old hives that died. It is strong and tastes of bee-bread, and is thick. Now, this honey made us all sick before it was cleansed. But we boiled it, and took the scum off. Will this do to feed, as I want to raise bees? or is there danger of its killing the bees? and if it is good, shall I thin it with water?

JOHN BAKER.

Saxonburgh, Butler Co., Pa., June 24, 1881.

The honey will do perfectly well for warm weather, as in fact will any kind of sweets that I know of, when the bees can fly out daily; but I should hesitate to use it for winter stores. Use it up for raising brood if possible, and then feed it up for winter with sugar. Boiling will much improve it, as you have demonstrated, and it might do for winter stores; but I would prefer not to risk it. Adding water will save the bees the labor of bringing water to put with it, and will thus help in brood-rearing; but in this case, do not dilute more than they will use up in a single day, on account of the liability to sour.

UNCAPPING-KNIVES, ETC.

I have extracted 140 lbs. of new buckwheat honey with my extractor to-day, and all works well except the uncapping-knife, and I conclude the failure in that may be in my awkwardness, although it don't seem to be sharp enough. It drags the bits of comb with it sometimes, thus tearing away the cells. Should I sharpen it, or would it be better to heat it with water? I have now 75 strong colonies, 18 nuclei, and 1500 lbs. of honey from 38 hives that came through the winter and cold spring. Bees won't notice broken bits of comb in the yard now that are full of honey. I have 2 acres of buckwheat just beginning to fail from drought; have one acre sowed, not up; have had no rain for 3 weeks; it is very dry and hot. Some frames of brood melted down last week, mercury at 103° in shade at 12. J. T. AYARS.

Bycan Island, Texas, June 14, 1881.

To be sure, you want your knife sharp, friend A., like any other tool. We try to have them made sharp enough when sent out; but it is a very hard matter to get them just as they should be, and a little touch of an oil-stone will almost always improve them, and sometimes possibly the grindstone too. When your uncapping-knife will cut paper by just drawing it across a strip, it is in nice order for uncapping. I should never think of fussing with hot water.

BEES OF ITALY; BY A RESIDENT OF THAT COUNTRY.

I have looked into the question of the two kinds of bees existing in this country; but whilst satisfied myself of the fact, I do not know how to proceed to satisfy others. I shall follow up the matter, and will inform you toward winter of my conclusion, and the grounds upon which I may base them. Bee-keepers here are, with few exceptions, ignorant and poor, having no idea of keeping bees but putting them in a hollow log when they have swarmed, and killing them in the fall with sulphur to take the honey. They have neither time, money, nor inclination to go further. Moreover, the agriculturist here has far more to do than in the U.S.; the crops, consisting of grass, wheat, hemp, and Indian corn, follow each other in such quick succession that no time can be given to bees. But you do not want a lecture upon Italian agriculture.

MORRIS S. WICKERSHAM.

Ferrara, Italy, June 3, 1881.

Many thanks, friend W.; but if you would just say right out whether you find any black bees or not, it would be a great favor to many of us here. We will take your word for it, and if you find no blacks, of course there will be no hybrids.

SUBSTITUTE FOR SANDPAPER ON THE SMOKER BELLOWS.

Did you ever try rubbing the tin case of a smoker with the coarse side of a rasp, and making a rough spot on which to strike matches? If not, try it, and I think you will find it better than sandpaper. It does not have to be renewed. A. T. McILWAIN.

Abbeville, S. C., June 14, 1881.

Many thanks, friend M.; but if you sandpaper the tin, it will soon rust, will it not? This may not be a very great objection, for a smoker tube pretty soon gets black and rusty any way. We will try it on one of our old ones.

CHAFF HIVES VERSUS CELLARS.

I would like to ask you to explain some things. But I will first give you a history of the case. My bees, 5 hives, came out this spring good and strong. Two of them were in chaff hives which I bought of you, and two in American hives which are packed in chaff, and one in Simplicity hive with chaff cushions; sides and an upper story filled with chaff. So I say, hurrah for chaff packing, for almost everybody around here has lost heavily. My father had about 30 hives in his cellar, but this spring they are very weak and backward, and it is the same with the others around here who put them in their cellars, while those who left them on summer stands lost the most of them. I had one swarm on the 30th of May, and one on the 1st of June, and the other three soon after, but now I am coming to what I don't understand.

AFTER-SWARMS, AND THEIR QUEENS.

When the second swarms came, I put some of them into hives that had just swarmed, and cut out the queen-cells. Some of them I looked into just as they were about to send out second swarms, and took out all the queens and cells but one. Some of the cells would have a young queen who was peeping to get out, and I would let her out and take out all the rest. But this morning I thought some of them acted as though they were queenless, and I can not find a queen, nor eggs in any of them, and some of them are building queen-cells (or have built them, and have them half full of royal jelly.) Now, what has become of the young queens, and what is the cause of their disappearance? Two of them I saw several days after I put them in (or let them loose from the queen-cell), and one commenced to lay, or at least, eggs were there. But now I don't believe there is a young queen in my yard. My bees are all Italians and hybrids. It has been so cold and wet in this section, that I think the white-clover crop of honey will be light. We almost always have a good yield of buckwheat honey. WM. F. SHERWOOD.

Liberty, Sullivan Co., N. Y., June 23, 1881.

Your plan of putting after-swarms in with some colony that has swarmed, friend S., I am afraid was not quite "orthodox," especially after you had destroyed all queen-cells. You see, your after-swarms contained virgin queens, of such an age that it is a very hard thing indeed to introduce them anywhere. I should think about half of them would be killed, under the circumstances. You may be in too much of a hurry for them to lay; it takes about a week, before you find eggs in the combs given to any after-swarm. Finding eggs in the combs right after the swarm was put in, would not be conclusive that the queen was laying, for you must bear in mind, eggs will be found in the hive until the laying queen has been absent fully three days. Give them some unsealed brood, and if they start queen-cells, then you know they are queenless and can give them queens.

GETTING BEES UNDER DIFFICULTIES.

I had lost all my bees, 20 stands. A neighbor of mine found one in a limb 65 feet high. He gave it to me, if I would or could get it down; I did so, climbing the tree *myself!* I think I did well, as I am *only* 56 years of age. I let the limb down safely, and transferred them into a hive. After it filled up, I divided them, filling both hives full of empty combs, and I now have two hives, and quite a lot of nice empty combs. I think I can find some more in the woods. I saw your advice, "*Don't go in debt for them.*" I am poor. My hives are nice, cost me over $100.00. So of course I want bees in them as soon as I can get them. J. BARGHERS.

Brookville, Mont. Co., O., July 4, 1881.

Pretty well, friend B., but I think after you have worked at bee-hunting awhile, you will conclude it is easier to raise bees than to climb trees for them.

DIFFERENCE IN QUEENS.

And now for a little talk to the class, if you please. I have seen much in the papers about the difference in the laying qualities of queens; and I have been studying the subject by a few experiments, and have come to the conclusion that some good queens are badly slandered, not "with malice aforethought" perhaps, but really misrepresented, notwithstanding. I have come to the conclusion that a good vigorous swarm of bees will make almost any queen a good layer. For instance, I had one swarm in spring that didn't fly much, and on examination I found they had a fair number of bees, but very little brood. I examined them from time to time for 4 weeks after taking out of cellar, and never found more than ¼ of a card of brood at a time. At the end of the 4 weeks, I changed places with it and a vigorous swarm, in the middle of the day, which gave her a fair swarm of vigorous bees; and in four days she had six cards well filled with eggs; and in an amazingly short time the space was full of bees, and it required the upper story to hold them and their honey. When I changed stands with the strong colony she had but a mere handful of bees. I afterward tried several others with similar results. I hope the friends will investigate this subject and report; and let us not call a queen poor, before she has a fair chance. H. V. TRAIN.

Mauston, Juneau Co., Wis., June 20, 1881.

Thanks, friend T. I have held much the same opinion as yourself, for a long time, and when I have heard queens complained of, I have often felt as if I would like to put them in a good colony, and "fetch them up," but still I feared to say any thing that might tend to encourage the keeping or dissemination of poor stock. During the past season we have scraped up every thing in the shape of a queen, just to accommodate those who wanted some thing to keep their combs from spoiling, and some small puny queens that did not look as if they could run a small nucleus, have proved equal to the best, in the amount of brood they would produce. Once in a great while, we find a queen that lays only a dozen or two eggs in a day, but these we can hardly call laying queens at all, for they never go right at it and fill a comb, and such should be killed at once, as we would a drone-layer.

OUT OF BLASTED HOPES.

My bees came through the winter without the loss of a swarm; 23 in cellar, and two on summer stands, packed in chaff. I like cellar best, all conditions favorable. My bees are all in splendid condition, and have filled their hives with fruit-bloom, and those on which I had placed boxes have partly filled them, which is some thing uncommon here so early in the season. My best swarm last season gave me 240 lbs. extracted — nearly all white-clover. Please count me out of Blasted Hopes, where you had me two years ago. I have had splendid success with bees ever since that time. C. BUTMAN.

Plymouth, Penobscot Co., Me., June 8, 1881.

SYRUP FOR FEEDING BEES.

Will you be so kind as to give in your next number a recipe for making sugar syrup for feeding bees, that will not grain in the comb after being fed, and not hurt the bees? Some recommend one teaspoonful of cream of tartar to the gallon of syrup. JOSEPH GARST.

Springfield, Ohio, July 8, 1881.

My plan, friend G., would be sugar and water, and nothing more. Many years ago we used cream of tartar and vinegar; but where the syrup was fed early enough so the bees had time to seal it up in the combs, we found it to answer just as well without any chemicals. If you use granulated or even coffee sugar, the bees will use it all up without any trouble, even if it should grain in the combs. Since reading friend Grimm's article in the July number, I have been wondering how he feeds to do it so rapidly, and how he prepares the syrup; what feed he uses, etc. Friend Grimm, will you be so kind as to tell the boys a little more about feeding, especially feeding sugar in place of honey?

CELLARS NOT ALWAYS AHEAD.

I lost over half of what I had last winter. I wintered some in the cellar, and some out on summer stands; all died that were in the cellar, but one. I use American and box hives mostly. I got through the spring and winter with 18 swarms, all black bees. They commenced working the 17th of April; commenced swarming the 12th of June; have had 5 young swarms, and have divided one, and have got over 100 lbs. of honey in surplus boxes up to this date. I like to hear from all of the A B C scholars, and the older ones too. GEORGE W. SORTER.

Wells, Tuscola Co., Mich., June 16, 1881.

TEACHER AND PUPIL, AND WINTERING IN A ROOM.

You said, on page 33, of last Jan. GLEANINGS, that you were afraid I had defeated any chance of "celebrating the Fourth of July, 1881," with the colony of Italians I was then wintering in a room above ground. That colony stayed in that room until about April 15th, and it is now *very* strong, having a great many bees, 8 frames of brood and honey (a large proportion of it brood), and two queen-cells started. "How is that for high?" It is better than some did who were not "green hands."

SAMUEL A. MILLER.

Bloomfield, Essex Co., N. J., June 9, 1881.

Pretty good for "high," I should say, friend M., especially as your teacher didn't winter his own bees at all, "scarcely." Now I wish you to tell me if you wintered that colony all these months in a room above ground, with a window in it, as such rooms usually have? If so, why did not the bees fly out on this window when you had days warm enough for them to fly? If you fastened them in the hive, did they not get very uneasy these warm spells?

WATER-BOTTLES FOR QUEEN CAGES.

Please send me 100 tin water-bottles for queen mailing-cages, such as used last year, by return mail if possible, or as soon as possible. I have abandoned the candied honey for the present, as the *very hot* weather, I fear, will be too much for it unless put up as I described formerly. OLIVER FOSTER.

Mt. Vernon, Linn Co., Iowa, July 7, 1881.

We too, friend F., have discovered that queens can not well be sent safely long distances during this very hot weather, and I must confess that it was with sadness I began to think again of adopting the water-bottles in queen-cages. At this juncture came some Peet cages from friend J. P. Moore, Morgan, Ky., containing a slender bottle made of light tin, much like the bottles in our cages for bees. His queens were always in beautiful condition; a tiny drop of water was always observable in the small orifice, not unlike a drop of dew, and the candy was always white and free from stickiness. I sat down and pondered on it. The cause of the leaking of the bottles, and the daubed condition of our bees, began to "leak" into my understanding. At first I had the candy in one part of the cage and the water in the other, and, I hardly know how, I got into a way of having the candy come right up against the side of the tin bottle. The result was, that the water ran by capillary attraction along the side of the tin tube until it reached the sugar, and then all the water ran out, some thing as it runs out of a wash-basin when the towel is left hanging in it. We are now going to put a little tube across, as friend Moore does. These tubes will cost about 2 cts. each, the best I can do; but I think with them our bees will be safe the hottest weather, for 10 days or two weeks. Elsewhere we give an engraving of the latest edition of the improved Peet cage, with the water-bottle in it. Price 7 c. each, or 80 c. per doz. If wanted by mail, 3 c. each extra.

ONE GOOD REPORT FROM THE RUBBER PLATES.

I have the pleasure to report, that after nearly deciding that those rubber plates were a failure, with me, I thought, this morning, the cause might be hard water, so I added a little lye. The result was a complete success. Tell the friends they must have soft water, a pint of lye in it, or perhaps borax would do. I. B. RUMFORD.

Bakersfield, Cal., June 25, 1881.

WINTERING WITHOUT LOSS, ETC.

I believe that I have not reported yet. My bees came through the winter splendidly, as they always do when left on their summer stands. I once wrote you that I would not give three cents to have my bees insured to come through winter sound and bright, *provided I* prepared them for winter. I suppose you thought I was either an idiot, or demented. I may say I never lose any, and it is true when I properly fix them up for winter. All I do is to see that breeding is kept up till cold weather; that they have stores enough, but not too much; then take off the division-board, place a piece of old carpet on the frames, fill in a peck or more of chaff on the carpet; replace the cover, and leave them alone until warm weather.

So far this has been the best season for honey that we have had in ten years. Bees have behaved well during the swarming season, very few having decamped. They have fairly heaped up the honey. There has been a succession of honey-yielding flowers, from the beginning of warm weather until now, there being no "wet spells" to wash the honey out. How long this shall continue, we know not. The wheat crop has failed, and there are hundreds of acres of buckwheat sown. J. W. JOHNSON.

Shelbyville, Shelby Co., Ill., June 22, 1881.

Friend J., our neighbor Blakeslee used to talk just as you do; but finally there came a winter when the bees *did* die, after all, even in his beautiful cellar; and since then, they sometimes die and sometimes they do not, just like a good many others of us. Glad to hear the honey is coming so well.

THICK COMBS FOR EXTRACTING.

I started this spring with three stands—one in a chaff hive, and two in single hives. I have received two swarms—one from the chaff hive, and one from one of the others. I want only one more swarm; that is, one swarm from each old one. My bees have got their upper stories filled very nearly full; one swarm, hived about three weeks ago on old comb, has its hive filled. I intend to extract from four hives next week. Are eight frames enough for the upper story? How do you keep the queen from laying in the upper story?

ELIAS BERG.

Cicero, Hamilton Co., Ind., June 18, 1881.

Eight combs will do very well for the upper story, if they do not make your arms ache too much in handling such heavy weights. We prefer about nine. The thick combs will do much to prevent the queen from going into them, but you will likely find some brood occasionally. Carry the comb containing the brood to some queenless hive that needs brood, after you have extracted the honey.

GOOD FOR THE BLACKS IN CHAFF HIVES.

We packed 18 colonies in chaff last fall; 3 of them were Italians whose queens we bought from you in August. The fall pasture was so poor that they did not winter through, so we lost all of our Italians, but took out 15 colonies of blacks, which thus far have given us 15 large swarms. We took our first surplus honey on the 15th of June. This is unprecedented success for this section of the country. There is a great deal of white clover here, and red raspberries are in full bloom. U. S. PAINTER.

Streator, La Salle Co., Ill., June 24, 1881.

A PLEA FOR BLACK BEES.

I wintered 14 stands of bees last winter on their summer stands without loss. I never had them come through in better condition. They are doing very finely now on white clover, when the weather is warm enough. I have kept Italians and native bees side by side for 3 years, and although I would like to keep Italians, I must, in all candor, say that my common bees give me the best returns in box honey. They will begin work in boxes 10 days earlier, they are not as likely to swarm, the fever is easier controlled when they do swarm, and as long as I raise comb honey I think I shall buy no more yellow queens. I have bought 7 queens of the best queen breeders in the U. S., and there was but one of the 7 I would raise queens from; and her bees were so dark they would hardly pass muster.

D. O. SWEET.

Rockport, Cuy. Co., Ohio, June 27, 1881.

DRY BRICK AS AN ABSORBENT IN WINTER.

Bees are doing splendidly here this season. I had 100 stands last fall, wintered on their summer stands, single-walled hives, and all the protection they had was gunny sacks placed on top of the frames, and tucked down nicely, and then a layer of new dry brick on top. I have wintered bees this way for the last five years with good success. My loss last winter was nine stands, all from starvation.

GEO. W. KENNEDY.

Carrollton, Carroll Co., Mo., June 28, 1881.

Although dry brick will absorb a large quantity of water, I can hardly feel, friend K., that it exercised any especial influence in your succeisful wintering. Would not a long spell of wet, damp, rainy weather, so charge the brick with moisture that it could not readily take any from the bees? May be you are right, and I am wrong, however, friend K.

INTRODUCING QUEENS.

Queen arrived all right yesterday, and I introduced her into a hive last night. I prefer introducing queens by placing them and their escort in a cylindrical cage of gauze wire, one end permanently closed, the other closed with honey-comb, full of honey. I place this between the combs, and, if the queen is acceptable, I generally find that she has been let out the next morning. I introduced this queen in that way, and when I looked into the hive this morning I found her out, and making herself very much at home. T. WILLIAMS.

Milwaukee, Wis., June 22, 1881.

But, friend W., are you sure the success of your plan, and a dozen other plans for that matter, was not due to the fact that queens will be received all right, in the majority of instances, when let right out without any caging, in any queenless hive, while honey is coming in? The case mentioned in this number, where I let loose 30 in an hour, was certainly not accidental their not being killed. I have actually lost fewer queens this summer, and last, where I have let them right out, than where I have caged them. Of course, if they are attacked, I would cage them, and it is likely that you will once in a while have one stung before you can rescue her, but such cases do not occur very often.

THE BLUE BEE;—SOME THING AHEAD OF APIS DORSATA(?)

There is a friend of mine who came from Indiana, and he says there is a man, one of his neighbors, who got a swarm of bees from New York, and another from Kentucky, both wild bees, and crossed them and produced a *blue bee*. He says they are larger and hardier than any bee he ever saw; better than the Italians, he thinks; they will work in rainy and foggy weather just like a bumble-bee; if the dew wets them, they shake it off and stamp their feet, and go to work as hard as ever. He says the man does not know how to ship queens, and that he sells them for $4.00 or $5.00 apiece, and the buyers run all risks. I want a queen, but am afraid to trust him, as I live in the far West. Couldn't you go and see him, or write to him and get some queens? They would be a great help to you, as I think there will be a great demand for them; and couldn't you afford to send me a queen for informing you? if not, I will buy one of you. The man's address is Robert Lucus, Orland, Steuben Co., Indiana. Also, that they are quicker than the Holy-Land bees or the Italians.

WILLARD R. LAMB.

Monterey, Monterey Co., Cal.

To be sure, I will, friend L., and I will "stamp my feet" too when this great bee does all you say. I could not well go to see him, but I will send him this journal; and then if he has got any left we can just send him some queen-cages, and he can put them in that, "sure." I was just wondering what was the matter with our Italians this year, because they did not start out during basswood bloom before sunrise as they used to do. I think it must be they were waiting for that great "blue bee" to come and do it.

HATCHING BROOD WITHOUT BEES.

My idea is, that sealed brood will hatch in chaff hives without any bees in it, as I know by experience of last summer, when I cut out some drone comb and laid it in my tool-box, and every one came out just as if they were in a hive of bees; so I think workers will come out also. I believe the queen will lay sooner in a comb when it is placed between two combs of brood.

W. K. DEISHER.

Kutztown, Berks Co., Pa., June 13, 1881.

To be sure, capped brood will hatch without bees, friend D., providing the temperature is kept high enough, say between 80 and 100. We have done this for years past in the lamp nursery. During the hottest summer weather, the bees follow the queen and feed the larvæ until it is sealed; and if the hive is destitute of bees, you will see only a ring of nurse bees around the outer edges of circles of sealed brood. Placing an empty comb between combs of brood is an excellent plan, if it is not crowded too far. Remember what Merrybanks said of such work a few numbers back.

SILVERHULL BUCKWHEAT.

Try silverhull buckwheat for breakfast for the bees during white-clover bloom. I think it pays as well as it does in the fall. One thing more about it; it is splendid for the bees to calm down on after basswood.

S. H. LANE.

Whitestown, Boone Co., Ind., July 15, 1881.

And I have got "one thing more" to add yet, friend L. Silverhull buckwheat holds up to $2.00 per bushel in price every year, and we can't get enough of it even at that. What do bee-keepers do with all they raise? I have this season sent to A. C. Nellis for all he had, and was finally compelled to send clear to Gregory, of Mass.; and after paying $1.75 per bushel for all he had, I had to go without any to sow myself. I sold it to customers for less than it cost me, after paying for bags and freight, rather than disappoint them. Wake up, boys, and raise not only honey for your bees, but seed for bee-keepers.

CHAFF HIVES.

Last fall I did not get my chaff hives in time to transfer from Simplicity until December. I then transferred 12 swarms, knowing that such action was opposed to all theories, and thinking my chances very slim for saving even a fraction of these 12 swarms; but I also knew by experience there was not the slightest chance to save any in the Simplicity with the weather at zero so early in the spring. The result of this rash transfer was 10 good strong swarms this spring. The two that died were very light when transferred. I also wintered 4 successfully in Simplicity hives in a damp cold cellar.

Wakeman, O., June 11, 1881. M. I. TODD.

NEWLY GATHERED GRANULATED HONEY.

Our honey this season is granulated when it comes out of the gum, and all our neighbors' is the same way, and I should like to know the reason, as there must be a reason for it. The honey is sweet and pleasant, but nearly all sugar. I have not fed my bees any.

W. C. HILL.

Jefferson, Tex., July 8, 1881.

We have had several such reports in back volumes, friend H. Your bees have gathered grape sugar from nature's laboratory, that is all. It is just as good as liquid honey, only that there is the same danger from hardening in the cells that there is from artificial grape sugar.

GOOD REPORT FROM COLORADO.

Bees just "beat the Dutch" bringing in honey. It just beats all to see how much honey a barrel of bees, in chaff hives, can bring in in one day. Ours are giving us 50 lbs. surplus per day for 10 days, and —we are not keeping up with them extracting. Can't tell how long it will hold out.

R. H. RHODES.

Arvada, Jeff. Co., Colorado, July, 1881.

If your apiary is composed of 50 stocks, friend R., that isn't a very large yield; but if only 10, it would do very well; while if only three or four chaff hives, it is pretty "big." Why don't you tell us how many?

HIVING A SWARM ON NOTHING BUT SECTIONS.

When increase is not desired, why not hive the swarm on frames of sections? It may be a common practice, but I have not seen it mentioned anywhere. As soon as bees are hived, all hands unite to fill up the empty spaces with comb, and they go in well prepared for it. I should like to hear how it works with others. My bees wintered well; lost two, with twenty left. It has been warm and seasonable since the 8th of April, and the prospect for the summer and fall was never better.

S. T. HAMILTON.

Botland, Nelson Co., Ky., June 20, 1881.

HUNGARIAN BEES.

As some of my customers have an idea that the Hungarian bees are marked similar to the Italians, I want to say, for the benefit of such, that the Hungarian bees are quite dark,—the hairs, or down, on the workers give them a whitish or very light gray appearance. Some of the queens show muddy whitish bands; the queens are larger than those of any other race of bees I have; very prolific, and their worker progeny very gentle, and fine honey-gatherers. Those who want fancy-colored bees had better not order them; but if bees are wanted for business, try the Hungarian. I do not raise or advertise pure Hungarian bees for sale. Every queen of this race will be fertilized in my apiaries where my Italian and Cyprian bees are kept. I consider this hybrid race as good as any in the world. H. ALLEY.

Wenham, Essex Co., Mass., July 18, 1881.

But, friend A., where did these bees come from, and when did they come? We know all about Italians, Holy-Lands, and Cyprians, but we have no record, that I know of, of any bees from Hungary. If they are any better bees than Italians, all things considered, of course we want them; but it is pretty expensive trying so many new kinds that differ so little from those we have.

INTRODUCING A QUEEN TO A HIVE HAVING A LAYING QUEEN.

We are having a good season for bees in this section of Iowa—perhaps the best we have had for years. You ask, in July No. of GLEANINGS, if any one has ever introduced a laying queen into a hive having a queen, so that both would continue laying side by side. I united a colony of bees last October with a swarm in one of your chaff hives; both swarms had good laying queens, and I did not hunt up the queen, as I could not use her. In April I opened the hive and found both queens laying side by side, as well contented as could be. In a few days I took out one of them and put in another hive, and they both proved to be splendid queens. I have had several old queens and their daughters laying in the same hive. M. M. CALLEN.

Moravia, Appanoose Co., Iowa, July 14, 1881.

STARTING QUEEN-CELLS WHEN THEY HAVE A QUEEN.

This morning I found a queen lying on her back on the porch of the hive to which I introduced the queen from Hutchinson two days before. This is a new swarm six days old; in three days they had queen-cells started on the foundation. I supposed of course they had lost their queen. They have no eggs. This is a second swarm from the hive, and they may have a virgin queen. I opened the hive and found a nice queen. Now, what "gets me" is, would they start queen-cells if they had a queen of any kind? The bees are hybrids, and whether the queen they now have is Hutchinson's or one of their own, I do not know. Can you enlighten me any? JOHN F. NICE.

Williamsport, Pa., July 18, 1881.

It may be set down as a rule, that a colony that starts queen-cells from brood given it is queenless, although there may be occasionally an exception. It should be remembered, that queen-cells are produced by two or more different causes, or impulses, as it were. One is from or under the influence of natural swarming, and the other, the starting of cells when suddenly deprived of a queen. Besides these two, bees sometimes seem to be displeased with a queen, and start cells to replace her. In deciding whether or not a colony is queenless, it is well to inquire whether either the first or last may not have caused the starting of cells. When you find a colony without brood, and see no queen, some brood suitable for starting cells should be given it at once; and after about 48 hours, if we find queen-cells, we are almost absolutely certain the colony is queenless. If no cells are started, we are equally sure there is a queen of some kind present, which should be hunted up.

SIDE-OPENING HIVES.

I was induced to go in for American hives on account, as I then thought, of easy operating; but I want, and will have, after this winter, hives that I can get out the last frame without having to take out all the others. You say you used them once on a time. Did the bees ever boil out when you took off the side to open it? Mine do sometimes, and then it seems as though I would like to be in my office studying out some intricate law problem, rather than trying to lay down the law to those bees. J. E. POND, JR.

Attleboro, Bristol Co., Mass., July 11, 1881.

I wouldn't wonder if they *did* sometimes "boil out," friend P., as you say. I used the side-opening American hives five years entirely, when I first commenced; but I then transferred all of my bees back into the L. frames again, where they were originally.

UPS AND DOWNS OF AN A B C SCHOLAR.

I will try to give you a bit of my experience as a bee-keeper. My first experience with bees was about 6 or 7 years ago. I got a swarm that settled on a peach-tree in our garden. It was hived in a box hive. I had many ups and downs, but more downs than ups for about three years; I didn't know, scarcely, any more about bees than an old hen, until I received a copy of GLEANINGS. I then began learning my A B C's. I made frame hives, and transferred my box hives. I have now been using frame hives for three years, and was making good headway when the past cold winter swept them all away but 3 stands. As I told you in the March No., my hopes were not blasted, and never will be as long as I have a stand left; but, more encouraged, I set out with renewed vigor, increased my stands to 6, giving each new swarm a two-story hive with 20 frames of comb each; Italianized each swarm, and have taken, to date, 430 lbs. of basswood and clover honey. They are doing well. Now, I don't know where they get their honey, unless it is honey-dew, which I think it is. I believe I never told you how I liked the extractor I got of you last year. Well, sir, I don't believe that I ever invested $7.50 in any thing that I was as well satisfied with. It works well. I have mine screwed to a bench, about 20 inches from the ground; this bench has a small leaf, hinged underneath the honey-gate, with 1½-inch auger-hole for the strainer to hang in, and a button to hold the leaf. I like this arrangement the best, especially when working in the apiary. I can pick up the extractor, take it from one hive to another, set a can or bucket under the strainer, and go to work. The strainer is never out of place. When working among the bees I hardly ever use a smoker unless they are very cross. Smoke should never be used unless it is necessary, for it often makes them crosser than if no smoke were used.

ELIAS BERG.

Cicero, Hamilton Co., Ind., July 19, 1881.

Notes and Queries.

D. A. JONES.

I HAVE not heard from Mr. Jones this season yet. Shall likely go and see him again this season. *He is all bees*, and a jolly fellow. I spent a pleasant day with him and his good wife two years ago, when he was right in the midst of that good season when he had every thing filled with honey; even collected all the women's wash-boilers to store his honey. He had enough honey to drown the whole village. How is that for Canada?

BENJ. DUITT.

Waterloo, Ont., Canada, June 6, 1881.

I have given up the use of tin separators. I don't consider them profitable.

HENRY DANIELS.

Plainfield, Sullivan Co., N. H., June, 1881.

Bees have built up very rapidly since the season opened, some reporting 5 swarms from 1 naturally.

WM. H. GRAVES.

Duncan, Stark Co., Ill., July 8, 1881.

CANDY FOR WINTERING.

My bees wintered all right, and one colony on candy alone.

E. T. HODGE.

North Edgecomb, Me., June 5, 1881.

FOREST-LEAVES.

I wintered 40 colonies out of 40 in Quinby hives, packed with forest-leaves on summer stands.

JOHN F. LOGSDON.

Barton, Allegany Co., Md., June 27, 1881.

My Cyprian bees wintered best of all. You have to be very careful in handling them, as they would sting you to death; but with care they are all right.

H. S. SHULL.

Wellsville, Columbiana Co., O., June 14, 1881.

Bees doing finely, making lots of honey. I lost none last winter or spring. Swarming began June 10. I wintered on summer stands, chaff hives, 25 stands.

ALEX. FIDDES.

Centralia, Marion Co., Ill., June 18, 1881.

Will queens' wings grow out again when clipped?

C. W. CLAYTON.

Laurel Junction, Ritchie Co., W. Va., July 2, 1881.

[They don't at our house, friend C. Once clipped, and they are clipped for ever.]

A SMALL STORY WITH A GREAT MORAL TO IT.

I commenced last winter with 15 stands; came out this spring with 11; the 4 that were lost were some that I divided and transferred. They did not fill up full like the others.

DAVID SPERRY.

Lincoln, Cass Co., Ind., June 6, 1881.

PRETTY WELL FOR AN A B C SCHOLAR

July 9, 1879, I got my swarm on a tree in the woods. When winter set in they had about six inches square of comb; I fed them on sugar and they came out quite strong in the spring.

SAMUEL BENSON.

Hockley, Ont., Canada, June 23, 1881.

THE CELLAR AHEAD.

I have only 41 hives of bees left out of 91; 21, left out of cellar, all died; the 41 are from the 70 put into cellar. My hopes are not quite blasted.

DENNIS GARDNER.

Carson City, Mich., May 24, 1881.

A SWARM GOING INTO A HIVE OF THEIR OWN ACCORD.

Thanks to an all-wise Providence, the cold weather took all my bees. This morning I took a walk into my bee-yard, and found that a swarm of bees had taken possession of an empty hive.

S. ANGLEMIRE.

Dupage, Ill., July 8, 1881.

The bees I received from the South are doing finely; six combs full of brood since May 19th.

GEO. W. HOWSELL.

Bainbridge, Putnam Co., Ind., June 16, 1881.

[The above was a hybrid queen with 1 lb. of bees, from G. W. Gates, Bartlett, Tenn.]

We have just passed through the greatest swarming campaign I ever knew, and it has been very annoying when you wish honey and not increase. Honey crop good; have taken off 2000 section boxes well filled, and of fine quality; have as much more to take off this week.

J. S. GILES.

Apalachin, Tioga Co., N. Y., July 13, 1881.

Most of my bees, or the larger half of them,—17 swarms, died during the past winter, but the remainder have more than doubled, and have filled every available cell with honey. The trouble now is, the breaking down of combs from overloading with honey, and the extreme heat, over 100° Fahrenheit in the shade.

I. E. STEVENSON.

Canal Winchester, Franklin Co., O., July 12, 1881.

DOLLAR QUEENS.

A dollar queen I had of you two years ago last June is just as near perfect as can be. We took out of her swarm last poor season 85 lbs. extracted honey; this year, 25 lbs., and a three-story hive full now. Her bees winter best of any here, and best every way.

GUY CLARK.

Bellows Falls, Windham Co., Vt., July 11, 1881.

GLOVES.

Please send me a pair of gloves. I suppose I shall have to be put down on the coward's list; but no use talking, bee-stings are not pleasant to have every few minutes through the day.

HONEY.

From thirty hives I have taken, to date, 1216 lbs. of honey.

CHAS. H. KINCADE.

Sterling, Chicot Co , Ark., June 23, 1881.

THE FUTURE OF THE ITALIANS.

I have about 225 colonies, blacks and hybrids, and I feel quite sure that they show more of the Italian each succeeding year; the best evidence that I can see of their superiority over other bees. When I commenced the business three years ago, I had a very few that showed one band; now half my stocks are marked.

T. G. H. JONES.

Nicolaus, Sutter Co., Cal., June 30, 1881.

[I think you are right, friend J. The bees in the woods, and those owned by the farmers about here, are now more or less Italian; and we have frequently purchased swarms during the past few weeks as nicely marked as any we have in our apiary. These, too, came from those who have never taken any notice of the Italians at all.]

Friend Root:—The smoker arrived, and I am well pleased with it. As soon as it came I smoked the bees simply to see it work, and I tell you it makes them "git furder" every time. **HENRY WARD.**

Buffalo Shoals, Wayne Co., W. Va., June 27, 1881.

A POUND OF BEES, AND A HYBRID QUEEN IN JULY.

I bought of you last July one hybrid queen and a pound of bees, which have their cap full of honey, and during last month have thrown off six complete swarms that are doing well. **R. W. MCFARLAND.**

Paulton, Westmoreland Co., Pa., July 7, 1881.

I wintered 11 stocks of bees without loss. They were well filled with buckwheat honey. I covered them with the hulls of oats. They were placed side by side, with a runway for them to go out at will; all came out strong, and that in this climate, sometimes below 25 degrees below zero, and hardly any thaw for three months. **C. NEADS.**

Lindsay, Ont., Can., July 5, 1881.

This has been a poor season for honey so far. I wintered 58 colonies, packed on their summer stands, and did not lose any; but it has been so wet and cold that they are not getting much honey.

A. W. SMITH.

Parksville, Sull. Co., N. Y., July 4, 1881.

[Guess you wrote that before the basswood came, did you not, friend S.?]

Bees are doing well. The loss was 7 per cent in wintering. They are now filling 3 or 4 stories of Simplicity hives with white-clover honey. White clover is yielding more honey than it has for the last 4 years. I have 30 stands which I have wintered. I had 60 last fall; I sold some of them, and fed 50 dollars' worth of sugar. **H. F. CARPENTER.**

Polo, Ogle Co., Ill., June 21, 1881.

I have just received notice of a shipment of 24 lbs. of bees to Ontario, Canada, with "not a cupful dead." Am I not improving? **G. W. GATES.**

Bartlett, Tenn., June 23, 1881.

[Well, I think you are, friend G., and I am glad of it, too, for I should feel very sad if I thought no one else but ourselves could ship bees by the pound safely every time.]

It is too bad that the red-clover queen died. I wanted to get another daughter from her. The one I got last summer proved very good stock; her bees at this time work as much on red as on white clover. I wintered 8 out of 21 colonies outdoors in chaff and sawdust packing; the Italians stood it better than the blacks. **AUG. J. HINTZ.**

Lemont, Cook Co., Ill., June 20, 1881.

A POUND OF BEES IN MAY.

Bees that I got of you in the spring are doing well. We got what started three colonies, and we now have eight doing well. We put them in hives that the bees died in last winter, and that gives them a good chance. Accept thanks. **H. LEWIS.**

Muncie, Ind., July 12, 1881.

[Do you not see how it works, friends? Friend L. had three tested queens, with a pound of bees and a frame of brood each, the 10th of May.]

GRAPE SUGAR IN THE SOUTH.

You know that barrel of grape sugar I got of you? Well, I have a little of it yet, and I will get more when it is out. I am not afraid to feed it to my bees in candy made like your recipe. I have fed nearly a whole barrel away, and I don't think I have lost any bees by it, but it has raised lots of them. By using it I have got some of the nicest queens and gentlest bees I ever saw. I very often look through them without smoke, and do not get stung once.

T. G. WALLACE.

Stone Mountain, Ga., June 4, 1881.

CYPRIAN AND HOLY-LAND BEES.

My Cyprian and Holy-Land colonies are ahead. I think I never saw a better queen than the $1.00 Cyprian I got of you last season. They get out earlier and work later than any colony that I have. Holy-Land colony is very prolific, good honey gatherers, but very cross. Which are the better sale, Italian or Holy-Land queens?

F. J. WARDELL.

Urichsville, Tusc. Co., O., June 6, 1881.

ROBBED BEES GOING HOME WITH THE ROBBERS.

I will help you answer Doolittle. In two instances I have noticed the remaining bees in a robbed colony come into my apiary in the form of a swarm, and take quarters with their victors; and in both instances they were attacked and nearly all killed. This happened once in the fall and once in spring, and both times my neighbor came chasing his swarm of bees. **D. WHITE.**

New London, Huron Co., Ohio, June 1, 1880.

Last year I had a colony of bees come to me in my dooryard, and I did not know what else to do with them, other than to *hive* them. They wintered through nicely, and have sent off two colonies (or swarms) already. I shall have to get rid of them, or read up and see what I can do with them. Can you give me light on the subject? **S. B. MARTIN.**

Onawa, Monona Co., Iowa, June 24, 1881.

[Accept them as a gift of God's own sending, friend M., and care for them accordingly.]

FASTENING IN FOUNDATION; A NEW TOOL FOR THE BUSINESS.

About fastening fdn. in brood-frames. I think that your No. 6 cast hammer is the best thing; use the claw end rubbed in a little honey. It works them down very nicely. Some of my hives have boxes nearly full of comb and honey, but what is it made of? They work very little on white clover.

E. D. HANFORD.

Wakeman, Ohio, June 27, 1881.

SENDING BEES TO OREGON.

The queen, in the three-frame nucleus I got from you, is laying all right now; but please make sure to put enough provisions with the queen you send now, for I am sure, if those bees had missed the steamer in San Francisco, and had to wait for the next one (five more days), that they would have all died; but as it is, they are doing well now.

WILL TRUE.

Astoria, Clatsop Co., Oregon, June 20, 1881.

FIRST ITALIANS WEST OF THE MISSISSIPPI.

I see, by May GLEANINGS, that some one in California claims the credit of bringing the first Italians west of the Mississippi River. I believe that I brought the first Italians west of the Ohio River. Aug. 1st, 1860, I received an Italian queen of J. P. Mahan, of Phila., he having imported 3 stands, about three months in advance of the Parson bees, of Long Island, imported by the U. S. We claim no *credit*, or *honor*. Who else will make the claim of prior date? **JESSE OREN, M. D.**

La Porte City, Black Hawk Co., Ia., June 14, 1881.

RAPE AS A BEE PLANT.

The rape I find the best thing to keep the bees from going to the cane-mills in the fall. If sown about Aug. 1st, it blooms till hard freezing. There are four cane-mills within one mile of me. Some years the bees go for them strong. I neglected to save seed, so had to send off for it.

ROBT. QUINN.

Shellsburg, Benton Co., Iowa, May 30, 1831.

TEN DAYS BEFORE LAYING.

The queen did not commence to lay for 10 days after she was introduced. Her bees just commenced coming out.

JAMES S. BROWN.

Pimento, Vigo Co., Ind., June 28, 1881.

[We often have queens that do not lay for a day or two, after a long journey, but not often where it takes 10 days. In view of this, however, I think I should keep a queen 10 days before deciding to destroy her, under such circumstances.]

DRONE BROOD IN THE UPPER STORY.

Please tell me how you prevent the queen from depositing eggs in the drone comb that is used for the extractor. I have them about 1½ inches apart. I wash them out with the hose when I find them, and then throw the water out with the extractor.

W. G. SALTFORD.

Po'keepsie, N. Y., June 27, 1881.

[Some one of our number has suggested sprinkling the drone larvæ, while quite small, with a minute quantity of fine table-salt. This kills it all at once, and the bees clean out the cells. I think this would be much less trouble than the plan you use.]

BEES AND QUEENS FOR SALE.

Would it not be as well for those who rear bees and queens for sale, to wait until "God has borned them," before advertising? Then there would not be such weary waiting and repining.

MRS. L. HARRISON.

Peoria, Ill., July, 1881.

[Mrs. H., you have hit the nail squarely on the head, and the people are fast learning which ones advertise goods, and don't have them when the cash comes. I do not know but that it might be well to have a growlery, in which folks might growl about other folks besides myself.]

The "Growlery."

This department is to be kept for the benefit of those who are dissatisfied; and when anything is amiss, I hope you will "talk right out." As a rule, we will omit names and addresses, to avoid being too personal.

GOOD FOR FRIEND BURCH, BUT BAD FOR US.

I ORDERED three queens of you, to be shipped July 1st. You wrote me you would make shipment promptly at time I stated, but no queens have arrived yet; but in the mean time I have received a splendid swarm of bees from H. A. Burch & Co. I wrote them some time ago to know if they could ship me a queen by a certain time; they replied they could not, and said, "If you can find A. I. Root, please stir him up a little, and tell him to hurry up your queens; he seems sometimes to get behind with his orders, and I guess almost all of us are sometimes unavoidably delayed in making out shipments, which annoys us as much as it does the purchasers." I have bought a good many swarms of bees, and I must say Burch sent me a rousing good swarm. I sold mine down to 20 last fall. I lost all but 3; have increased to 10. Well, friend Root, send the queens as soon as you can. G. W. KINNICUTT.

Tecumseh, Mich., July 13, 1881.

As soon as I had read the above, I took it directly to the queen clerk, to see what the matter was. Here is her reply:—

Dear Sir:—Mr. Root is nowise at fault for the delay on the above queens, and I do not wish you to attach any blame to him for the same. The matter was left in my hands, and the delay was caused by my being so careless as to overlook your order. If you will now make out a bill of damages I will willingly pay it.

I. C.,
Clerk.

I am very sorry indeed for the 12 days' delay on the queens, friend K.; but I confess I felt rather pleasant when I read the letter after all. I am *very* glad indeed to get such a letter in regard to friend Burch, and I confess I am a little proud of having clerks that will take the responsibilities of business off my shoulders, as the above indicates. Notwithstanding the heavy trade we have on queens, I do not know that the clerk ever made such a mistake before, and I trust she never will again. I am responsible, though, and always expect to be, for all my clerks' doings in my employ.

TOBACCO COLUMN.

A CALIFORNIAN FINDS VIEWS ON THE SUBJECT.

I HAVE used both tobacco and whisky, and hardly know which was the worse habit. I did not have much trouble to stop drinking whisky, as the habit was hardly established. I began to smoke at about 17, and used tobacco about 12 years. At first I thought it *very manly*, then I was not comfortable without an after-dinner smoke. By and by I began to be dyspeptic, and thought tobacco hurt me, so I quit and have stayed "quit," though it took at least two years to outgrow the craving for my after-dinner smoke. Since then I have induced a few to quit, but 'tis slow, up-hill work. Hope your smoker plan will succeed better. Men say they have the right to smoke; yes, perhaps so, on their own premises; again *perhaps not*, in a moral sense, if they have a wife, and a coming family to inherit the sins and appetites of their parents. I contend that no one has a right to puff tobacco smoke in my face on the street, or in any public place, as a post-office, where people are compelled to go. In the winter of 1879 I stopped some months in a town in Ohio. The post-office waiting and delivery room was about 7x9 feet, with a low ceiling. Repeatedly I have seen this room so full of tobacco smoke, that one could hardly see or breathe. Yet here were delicate young girls *sent* for mail, and had the alternative of this smoke or the cold snow or rain outside, and yet we boast of our Christian civilization. Twenty years ago there was a little pamphlet containing 3 essays on the evils of tobacco-using; it was the best thing of its size and kind I have ever read. One essay was by a minister, another by R. T. Trall, M.D., and was sold by Dr. Trall, No. 15 Leight St., N. Y. Dr. L. M. Holbrok of the above place may have it, or some thing as good, from which you can get arguments against tobacco. Fowler & Wells also used to publish some good things against tobacco.

Los Angeles, Cal., July 1, 1881. J. H. BEMIS.

I am going to try the smoker's pledge; if I fail, you get your money. W. J. Endly.
Edgerton, Johnson Co., Kan., June 27, 1881.

Since you make such an exceedingly grand offer of a smoker to all those who quit the use of tobacco, I for one have stopped the filthy habit, and avail myself of the opportunity. Send the large Quinby.
North Lima, O., June 14, 1881. J. Buzard.

Accept thanks for smoker. It is just the thing to tame the bees. If ever the pledge is broken, I will send you $2.00 in cash. Bees are doing finely.
W. H. Collins.
Ayersville, Ga.

The smoker I received in good order 2 weeks ago to-day. I am very much pleased with it. Mine was not only a promise to stop smoking, but it was a *self-will* to stop. S. C. Gates.
East New York, N. Y., June 25, 1881.

I am happy. I received the Smoker's smoker in due time, and find it just the thing. I can now drive the bees around like sheep in a pasture. I am holding the fort so far. When I fail you will receive $1.25. W. J. Endly.
Edgerton, Kan, July 4, 1881.

Send me one of your largest Simplicity cold-blast smokers, if you wish to fulfill your promise which I see in Gleanings. I have not smoked a cigar nor pipe in two months, and, with the aid of my Maker, never will. M. A. Joiner.
Sun Hill, Ga., June 27, 1881.

Put me down as one who has tried to stop, and has demonstrated that, by the help of a higher power, I have been enabled to let it alone for some time. Have chewed for 26 years. If I fail I will pay double price for the pledge. Geo. G. Herriman.
Cambridgeboro, Crawford Co., Pa., June 13, 1881.

I see so many in Gleanings are throwing away the pipe and tobacco, so please send me a smoker, and I give you and God my word that I will never use it again; and if so, my wife says she will settle the cost with you. D. F. C. Hambly.
Quincy, Plumas Co., Cal., May 28, 1881.

Now, friend Root, I see by Gleanings that you still give away smokers to those who give up tobacco. I have been a smoker, but I am determined to quit, for I know it is an injury to my health; so, if you send me one, I will pledge myself that I will never use the weed again; and if I do I will pay you double for it. H. Lewedag.
Wheeling, W. Va., June 17, 1881.

I see you are giving smokers to tobacco-chewers, for quitting. Now, I was one of the worst chewers in the State; it would have killed me if I had not given it up in February, 1865. I gave it up, and have not tasted it since, and never will. I don't want any man to give me a smoker to quit, either.
Geo M. Bryner.
Cisna's Run, Perry Co., Pa., July 6, 1881.

Will you please send me a Bingham smoker, as I have quit using tobacco. I have used it six years, and have become a perfect slave to it. If I ever use it again, I will pay you for the smoker.
James Forbes.
Macedonia, Summit Co., O., June 23, 1881.

You add one more to the little band, friend F. May God help you!

I see that the tobacco column is increasing. I have made up my mind to give you one more name for that column. I have used tobacco for fifteen years, but will quit for a smoker. I will send you ten cents to pay postage on it. I think that every one who gets a smoker this way ought to be liberal enough to pay postage. M. F. Mosier.
Palmyra, Harrison Co., Ind., June 7, 1881.

Thanks, Friend M.

I am 47 years old; commenced using tobacco more than 20 years ago—became a slave to both chewing and smoking, in the army. I lost my health, and the physicians told me tobacco was injuring me. I quit using it more than a year ago, and with the Lord's help I will never touch it again. I would not report until I was satisfied that it would be a success. Go on in the good work. S. Buchanan.
Irving, Kan., June 29, 1881.

An old tobacco smoker wants a bee-smoker (your invention.) Having used the "weed" for a great many years, I have fully decided it to be a bad habit, and have not used any for some time, being fully convinced I have mastered the business, and now send in my recommendation for a smoker. According to Gleanings, you send them "on the cheap." Now, I think it is a little too "steep" for a Western man to ask you to pay him for dissolving partnership with a bad habit. In my next order I will send you the money, as I do not want to make an order at present. Wm. Smith.
Mill Creek, Utah, May 19, 1881.

I commenced the use of tobacco when quite a boy, and continued it until six years ago last January, at which time I became thoroughly convinced of all the demerits attached to its use, and I resolved that I would control "this little matter" myself. I went down on my knees before God, and asked his assistance. It was easy, and now I stand high above temptation, and I can find nothing that even savors of a reason for its use. I really believe it is sinful in a degree. Now, is there a deficiency in the minds of those who persist in its use? or is it for the want of sober reflection on the subject? or do men naturally want to be unlike a higher order of beings? Hiring men to quit is commendable, brother Root; but the least degree of commendation belongs to the party hired. Am I too severe? Pardon!
J. H. Roderick.
Dodd's City, Fannin Co., Texas, Apr. 23, 1881.

I have a smoker, but it is a poor thing, as it is hard to get it to work. I have resorted to the pipe to smoke my bees; have not much of the habit yet. Now, if you will send me a Quinby, I will discard the old pipe. D. S. Burbank.
Reinbeck, Grundy Co., Ia., July 6, 1881.

We send the smoker, friend B.; but, to tell the truth, I feel more troubled about your case than any one that has yet come up. A few years ago it was said by some, that the way to get a situation in our establishment was to get drunk and be put into jail. Now, if anybody has *commenced* smoking, that they might write me and get a smoker for stopping, I am in danger of doing more harm than good. I believe God has guided us in this department so far, and I feel sure he will guide us safely through the danger that opens up here.

Our Homes.

How amiable are thy tabernacles, O Lord of hosts! My soul longeth, yea, even fainteth for the courts of the Lord: my heart and my flesh crieth out for the living God.—PSALM 84: 1, 2.

AT 6 o'clock, Friday evening of the 15th of July, I was at work in the office; but at 7 I was on my way to see Ferry's seed-gardens. I told the hands at the noon service where I was going, and why. It was a beautiful tranquil evening as we crossed the lake, but after enjoying it a half-hour I began to be ashamed of myself for having nothing to do. No one seemed to talk. If I went to bed without saying a word for the Master to anybody, I should miss a joyous consciousness of *his* presence, that I dislike to fall asleep without. Near me sat a man who had been silent like myself. With a prayer for the blessing that had been given me so many times before, I opened conversation. He was a manufacturer, like myself, and employed many hands. He, too, lamented the presence of tobacco, whisky, and profanity. Although a foreigner by birth, he was free from all these vices. He was a member of no church; but before we closed, he promised me, though perhaps indirectly, to "seek the kingdom," for he said he had been for some time tending that way. God blessed the effort in another way too, for they make a kind of goods I had long been wanting to get direct from the manufacturers.

The first bee-man I found was Otto Kleinow, of Detroit. He is a young German, but I tell you he is a good bee-keeper. His yard is entirely surrounded by a high board fence, and the ground is covered with sawdust. The hives are all chaff, neatly made and nicely painted. On the fronts of many, are beautiful pictures. His native taste for gardening shows itself in the beautifully arranged and trimmed shrubbery. On a pretty little peach-tree we found a swarm of gentle yellow Italians. In fact, his bees are all gentle and yellow. I found the queen as they hung on the tree, and we put them in a hive. Honey seems coming yet in plenty. Otto is extremely nice and particular in every thing (he is over 30, and unmarried; but I "scolded" him about it.) Although his father keeps a beer-garden, Otto neither drinks, swears, nor uses tobacco. Very kind and respectable people are his parents, and I hope, as I have been told, no intemperance is allowed on the premises.

Mr. Hunt is a fair type of one of America's independent young farmers of the present day. He is not what men call rich in this world's goods, but he is rich in brain and muscle, and a lover of square honest work on his own ground. His pleasant little home is all the work of his own hands, and the young man who could look on it and not be inspired to "go and do likewise" isn't worthy of living under the American flag. His apiary is on a lawn, and is in the shape of a hollow square, the bees all going out toward the center. Like friend Kleinow's they are very prettily painted. The effect from the street, of some of these painted with ornamental paneling, is exceedingly pretty. Friend H. makes his own hives, paints them, and does every thing. One of the first things that attracted my attention as I jumped out of the buggy was a prettily painted Adams' horse-power made from a drawing and description given in GLEANINGS in former volumes. It works splendidly, but friend H. says you must use a chain instead of rope. It costs but little more, and can remain right out in the weather. The wheel should be not less than 15 feet in diameter.

Ferry's seed-store is an immense building. The appliances for accuracy, and for facilitating work, more than once reminded me of our little building at home.

On the way to the seed-garden I asked friend Hunt about his reasons for not going to church and Sabbath-school. It was the old story of the "inconsistencies of Christians." One instance given was of that of the members of a church in his neighborhood, who turned off a nice young minister because he went out shooting with the boys of his congregation. Another was of a minister who raised and kept so many chickens that they damaged friend Hunt's fruits and garden to a most aggravating extent. When our friend expostulated with him in a Christianlike way, he asked him if he could not get a little dog and train him to drive them out. This minister turned out badly, as I should suppose he would. The people were bad, and the ministers were bad, and friend H. didn't want any thing to do with them; that is, he did not want to go to their meetings. These cases occurred some time ago, however. Friend Hunt likes the minister they have now, and I think he likes the people; and I guess, too, he is going to church.

Of course, this holding aloof because others are not doing right is not the thing; but is there not a lesson for ministers and professing Christians to learn? Just take a look at friend Hunt's nice little garden, where he has labored hours while nearly all the rest of the village were asleep, and see the berries and fruit he has watched and loved as only an enthusiast can love such things. It would seem that any minister should recognize the very great need of getting the youth of our land interested in such rural industries; but to annoy one such, and to discourage him by the depredations of chickens—how will this do for a motto for ministers and other people?—

"If chickens make my brother to offend, I will keep no chickens while the world standeth."

In talking over industrial matters, friend H. made the remark, that he once used to spend a great deal of his time lounging in the grocery. I guess that was before he got married, for his wife says he now works so many hours on his grounds she has to plead with him to stop. He has raised 147 *bushels* of strawberries from a single acre of ground.

Ferry's seed-garden is immense. Fields almost as white as snow with the blossoms of seed onions stretch far into the distance. As our visit was made in the afternoon, but few bees were on them. The work is mostly done by women. The soil is beautiful, and Ferry has paid for some of it, I was told, as high as $500.00 per acre. The apiary, kept on the grounds of Mr. Cottrell, another young fruit-grower, is prospering most finely. As both are busy men, it was built up principally by artificial swarming. The hives are all of friend Hunt's make, and present a fine appearance; almost every stock, new and old, were at work in the boxes. As we took a look at friend Cottrell's berry-garden, both gentlemen spoke enthusiastically of the way the bees worked on the improved red raspberries, when they were in bloom. The sight of the well-kept rows of bushes was a treat to me, and the wonderfully large luscious fruit was another treat. Friend C. prefers the Cuthbert, and the berries we picked from little vines just started were enough to set me in a raspberry fever, if it didn't the rest of them. Who among our friends has the real Cuthbert raspberry-plants for sale?

Friend Cook, of the Agricultural College, had written, urging me to be present at the evening prayer-meeting of the college boys, and I was therefore prevented from going to meeting with friend Hunt on Sunday. Well may not only Michigan, but the whole United States, be proud of the college and the college grounds. Sabbath morning we attended service in the city of Lansing, and the words of the young minister who preached from the text, "Blessed are the pure in heart," ring in my ears still. Their opening hymn was one of my favorites, and as it welled forth and rose under the tones of the grand old organ, the words of the text at the head of my talk to-day came into my mind. Almost a stranger in a strange city, I thought I could feel a little what David did when he uttered it. I was especially pleased to hear the pastor speak of their prayer-meeting, teachers' meeting, Sabbath-school, and their work during the week, in a way that indicated his whole heart and soul was in it. I fell to wondering if he was not stirred to unusual powers, somewhat, by seeing the face of such a man as friend Cook as one of his audience. The bee-keepers of our land are certainly of more than average intelligence, and I know full well the help it gives a pastor or S. S. superintendent to know that he has the presence and sympathy of the best men of the community. My friends, if you were all present during the church services of your town and neighborhood, your ministers would not only preach better, but I am not sure but that they would lead better lives. I can scarcely tell you how much I approve of the spirit of the Agricultural College, especially that part of it that teaches the boys to beautify and adorn their own homes on the farm, with little labor and expense. This department is under the charge of Prof. Beal, and his flower garden was to me "a thing of beauty" I shall not soon forget, and I presume the idea will bloom in many homes in our land, and prove a "a joy for ever" to more than one home and its inmates. His collection of clovers, from all over the world, was also to me a rare feast. The apiary is pretty, but it seems to me it is a little cramped and crowded. Our own has pleased us so much since we have abundant room for it, that I am pretty strongly in favor of having the hives scattered. The honey-plants in bloom are alone worth quite a little to any bee-keeper. A field of raspberries, raised by the students, still stands out in my mind's eye, and I mean it shall stand there until I have one on our own grounds that pleases me as well. I may be a trifle hard to please in such matters, but I was many times "just suited" in passing over the college grounds.

At about 9 o'clock Monday morning I was to start home. But several things, since my visit to friend Cook, had been suggested. One was that perhaps I am laboring and pleading with the world at large so much that I am neglecting those whom I am related to by flesh and blood ties; that it may be I am better acquainted with the men in jail who have committed crimes, than with my own children, some of them. In my father's family were seven children. The playmate of my childhood was a sister just a little younger than myself. She now has seven children of her own, and some of them I have never seen. When I told friend C. that she lived in Michigan, and I was going back without even seeing her little family, he declared I should let business go for at least one day, and go and see them. Another thing: Our daughter Maud, who is now a great child, taller than her mother, was at this very time on a visit to this sister. As she had never been from home before, when she started I playfully told her to remember that, when trouble or sorrow came to her in her absence, to be sure to recollect I said it would do her good. I thought she might be homesick, and I wondered if the sight of her papa away off there, so unexpectedly, might not do her good. The station agent said I could just make Manistee that night. Away I went, further from instead of toward home. About 1 o'clock I was told by the conductor they had just taken off the noon train at Reed City, and that, instead of going right through, I would have to lay over until toward 8 o'clock at night, seven or eight hours, amid utter strangers, when every moment was so valuable. Should I get cross, and think hard things of the railroad officers, or should I say that God had so ordered it for some good and wise purpose? I soon chose the latter, and asked him to point out the way whereby I might be of use, even away off among strangers in the northern part of Michigan.

The minute the train stopped, I sprung off, and began scanning the grocery stores. Soon my eye caught what I wanted.

"Friend, will you be so kind as to tell me who furnishes you this fine honey?"

"It is produced by a man over east, by the name of Len Reed."

"How far is it?"

"Oh! perhaps three or four miles."

"Can you point me the way?"

He remonstrated about my going on foot; but I had got tired of riding, and besides, livery teams cost money. I crossed the bridge by the mill, and was soon over the hills and into the great pine woods. My feet slipped into the sand, and the sand slipped into my low shoes, as I went up and down the hills; but for all that, I was happy. I was about the Master's business. I did not know where, or what was to be done; but he did, so why did it matter? I picked wild raspberries, listened to the cowbells, and thought of the sister I could not see until to-morrow, and away back in years gone by, when we used to have a cow that wore a bell too. How the sound of those bells awoke old memories! The houses were all passed, and I was following a crooked road out in and through the woods. Was it possible I should find a real progressive bee-man, away off in these wilds? When I did find houses, it hardly looked as if their owners could be bee-men.

Is it possible I shall, in this wilderness, find a man with an apiary of from fifty to a hundred colonies, as the man at the grocery store said? I certainly must be pretty near there now. Over another hill, and, as sure as you live, I came on a buckwheat field. The plants stood all around among the stumps, but I think I never saw a thriftier growth, or a brighter green to the leaves. I wonder if buckwheat don't do better on a sandy soil. It was already beginning to blossom a little. Over the hill again. Surely this must be the man, for there was a garden, an orchard, and many evidences of just about such homes as bee-men generally have.

"Does Mr. Reed, the bee-man, live here?"

"Yes: he is out among the bees; will you not step in?"

"No: I think I will go out among the bees and see him."

Did you ever! Here in the wilderness was an apiary, sure enough. On a beautiful grassy lawn, sloping to the south and east, 50 or 60 hives, all painted red. To prevent the sun making them too hot, each hive had a light cover, or sun-shade, made, if I am correct, of split shingles. The gable ends were open, so as to give a free circulation of air; but the roof boards projected so as to make a very effectual screen from the sun. His hives are of the Mitchell pattern. He has a division-board at each end, and the combs in the center. As all the hives we opened had an empty space at each end, it was very easy work lifting out the frames. Basswood seemed just in its prime here, and the bees were going across the valley to a basswood forest beyond, in a way that, to me at least, was entrancing. We opened some of the hives, and found snowy-white combs everywhere.

"I declare," said friend Reed, "although this is a new swarm that I have extracted from twice, they seem to be entirely full again, and ought to be extracted this very day again."

"Let us do it," said I; "I would like above all things to help you extract."

He got his comb-bucket, which was made of wood instead of tin, and, turning back the mat, he lifted out three combs, sealed almost from top to bottom; and as the next was a brood comb, he let the mat down, and, moving the division-board at the opposite end, he took two capped combs from that side. Thus you see the brood combs were not moved at all, nor were they even uncovered. The bees kept right on at work, for they were not interrupted or hindered at all, the entrance being in the middle of the side of the hive, instead of at the end, as in our old Standard hive. We took the five combs into the extracting-room, which, by the way, is a room built in the side of one of these sand hills, and is a very nice, cool, and comfortable place to work in during a hot day. Sure enough, there was the veritable Novice honey-extractor, but it was not our make, and had no honey-gate. I took the Bingham honey-knife, and went to uncapping. It was the first time I ever used a Bingham knife, and it certainly is a very fine thing for the purpose. Friend R. set a two-gallon stone crock, with a piece of strainer cloth tied over the top, under the tin-spout of the extractor. Before all the combs had been whirled, friend R. spoke,—

"Why, I declare, if that crock isn't full from just these five combs!"

"It is hardly possible, is it?" said I.

But it was. After looking for a little while at the thick crystal honey running on the floor, our friend bethought him of an expedient as a substitute for honey-gates, and he tipped the extractor back with a jerk, and propped up the front edge. As we did our uncapping on the top of a barrel, the honey soon threatened to run from that on the floor also. To save it, I very thoughtfully scraped it up and put it into my mouth.

"Why, friend Reed, this honey isn't basswood, nor does it quite seem to be clover either. What is it?"

"Why," said he, "I will tell you. You see, after they clear off the pine woods, the wild red raspberries spring up until there are hundreds of acres of them, and this year our bees have just brought in any amount of this red-raspberry honey. Why, I have had honey this whole spring and summer just as it is coming now, and I don't remember a time when I could not extract without having a bit of robbing."

"Then this is really raspberry honey!" And to make sure, I dipped and tasted the honey from several of the stone crocks that were full, like the one under the extractor-spout. "How much do you get for honey like this down at the grocery store where I saw it?"

"Fifteen cents for extracted honey, and 16 for comb."

The honey is very white and clear, and the flavor is nearest to that of clover, with a slight flavor that one can easily imagine is like the raspberry fruit. Friend Reed winters his bees on their summer stands, with large boxes placed over them, and packed with chaff in the usual way. He says he has tried wintering them in that dry sandy cellar, but it don't work well. He thinks that it may be too dry. And this reminds me that they have a stream of water running through the cellar they winter their bees in at the college apiary.

The women folks then announced supper as being ready. I always like to go to supper when I am visiting bee-keepers, and this afternoon the call had an especially pleasant sound. Perhaps it was because of the miles over the sandy hills I had come, and may be because the table looked very inviting where it was placed almost in the open air. The table was set on a platform of boards covered with branches of trees, and as we partook of the food I wondered several times to see such a structure in such a backwoods place. No blessing was asked before partaking, but I have found this is no unusual thing, even among professors of religion. I soon found, however, that my friend and his wife used to be members of a church, both of them; but since they had moved into their new home here in the woods, they had not united with, nor, if I am correct, attended, very much any church. The reason was, that there was none of their own people near.

"But is there no other church near here?"

"Yes, sir: there is one within about two miles."

"How long have you lived here?"

"Thirteen years."

"And you have brought up this family of boys and girls without attending God's house on the Sabbath, just because there are none of the sect you prefer near you?"

As they bowed assent, it just then occurred to me that God had stopped that train, and sent me off here in the woods, perhaps just on purpose to speak a word for his work and his "tabernacles." Oh how I did wish that my powers of persuasion were greater! I did the best I could, and assured them that I would at once unite myself with any church that happened to be nearest and handiest, where they would let me make myself useful, if the one I preferred were out of the question; and as I felt the time for me to go had come, I could plainly feel God's approving voice for having tried to fulfill the commission he had given me for that afternoon. I was pleased to hear my friend tell his wife that no man in the world, not even the President, would have been a more welcome visitor. As I neared the door, somebody whispered, "There comes the minister!"

As I met him at the door I said, "My friend, I take the liberty of introducing myself to any one who is a minister of the gospel I love."

"I know you, Mr. Root, already," said he, with a pleasant smile.

"And how do you know me?"

"By the Home Papers."

I told him what I had been saying to these friends, and that I hoped God had sent him thus opportunely to second my efforts in the cause. As I rode down to the station I learned from my friend that the booth under which we took supper was built by his boys *for a dance on the Fourth of July*. May God's blessing rest on that pretty little home and apiary, and may he lead those boys and girls to accept the call,—

Come, souls that are longing for pleasure,
Our Savior has pleasures to give;
Come find in his love the rare treasure
That makes every true pleasure live.

I reached Manistee the next morning, and a warm welcome I received, I assure you. Maud was homesick, sure enough, and very glad indeed was she to see the face of her papa so unexpectedly. I asked her if she would like to go home with me, and she replied in the negative; but while she did so a tear started and ran down one cheek, and before it could be wiped away, another had started down the other. Reader, were you ever homesick? I very much wanted to stay a whole day; but I feared some of you might, in my absence, say I was not living up to my preaching, if your orders were neglected, and so I started home again on the afternoon boat. It was not much of a visit I had with my sister, but still I had good reason to feel that God sent me nevertheless. I asked Maud, in starting, what I could do to make it pleasanter for her, or what I could tell them at home. She tried to answer in an even voice; but in spite of all she could do her answer was,—

"Tell ma—I want to see her—and the children—*awful* bad."

I waved my hat to her until the steamer took us out of sight; but her sad and sorrowful face followed me long after. This was the trouble that had come, almost the first she had ever known; but I felt sure God had sent it, and that it would, as I had told her, do her good eventually. She will love her home now as she never loved it before.

At Pentwater I stopped over night with a relative, and asked if Maud had been homesick when she was there.

"why, no; not that I know of; and still, since you mention it, I guess she was."

"What did she do Sunday?"

"Why, she said she wanted to go to all the churches and Sunday-schools and prayer-meetings she could, as she thought that would please her papa most if he knew what she was doing."

God bless thee, my daughter Maud, for thinking so much of what your poor old papa would wish to have you do, even though he has hardly stopped his busy cares long enough to get acquainted with his own daughter, at an age when she is just changing from a child to a woman! May God forgive me if *I* have forgotten the home I should daily thank God for, as well as yourself.

On the boat I was extremely pained by the awful swearing of the pilot. As he came near me once I ventured a slight remonstrance. Either he did not hear me, or it made him angry, for he seemed to swear worse. It finally became so bad that I decided I would make the best protest I was capable of, whatever the consequences might be. To prevent being sea sick, I was standing in the forward part of the little boat. As there was quite a breeze ahead of us, the waves were higher than I had ever seen before; and as the boat rose and fell, sliding down the great waves like a boy's sled in coasting down hill on the snow, and then suddenly climbing up another wave right before it, the motion would have made me sick, surely, were it not for the great draughts of the cool lake breeze that I drew in at every breath. I held myself upright, by the capstan, and I very soon began not only to feel proud of my victory over sickness, but a feeling of exhilaration took its place, and I soon began to enjoy it hugely. In fact, as the waves were on the rise, I soon began to wish we might have a bigger one than ever before, even if it did seem as if we were sinking one minute, and going to the clouds the next. It seemed like my old horse-back riding, only tenfold more exhilarating. As I enjoyed it, my heart rose to God in thankfulness. In this mood, you can imagine somewhat my feelings when these loud, bitter curses came constantly to my ear. I tried to think it was no business of mine, and that it would be out of place, and strange and eccentric, for me to interrupt a man who was running a boat. The conviction came on me clear and sharp, that I must do it. I thought of Jonah, when God told him to go and preach to the Ninevites. If I evaded the duty, I knew, by past experience, all this joy and happiness would be gone. It was going already, while I dallied with temptation. I made up my mind to do it, but the dread was such that I trembled already. I do not wish to have people think I am crazy, or a fanatic; and above all do I fear weakning my influence by doing any thing unwise or hasty. I told God I would do his bidding, or, if you choose, I made up my mind to do my best to stop the swearing. As I prepared to take up my work, I prayed mentally, "O Lord, my Savior, thou who has helped thy servant so many times in times past, under similar trials, help me, I pray thee, now. Thou who hast so many times before, in answer to prayer, paved the way, and gone before me, I beseech thee go with and before me now. Thou knowest how I shrink from harming thy cause by any course that shall seem strange and eccentric; and now, I pray thee, open a way by which I may do thy will, in a way pleasing in thy sight."

I have gone thus fully into details, my friends, to show you how easily God answers prayer. Just notice: I had for a moment forgotten to regard the waves, but stood absently, as it were, taking in the delicious air with mouth pretty well open, when a wave, larger than any before, struck the boat and went clear over it, giving me not only cool air, but a whole mouthful of cool lake water too. It went into my mouth, filled my pockets, and gave me such a drenching, that the pilot and captain both burst into a loud laugh.

"Stranger, why do you stand there in the wet? Why don't you go down into the cabin?"

"I fear I shall get sea sick unless I stand in the wind," I said, as I smiled through my wetness.

"Why, bless you, you can have the air without so much water; come up here and stand with us."

The man to whom I was going to talk extended his hand, and there God had placed me, by the pilot's own invitation, at his very shoulder. It seemed as if God had replied to my prayer, "To be sure, I will help you, my child. Did you doubt that I would make the way plain and reasonable for you? There you are, right by his side."

But it was not so easy then. He had just spoken so kindly to me, it seemed harder still to "commence on him," as I might term it.

I was not long undecided, however. He began to boast that he was never sea sick in his life, and wound up by cursing God, and defying him, because of his strength of constitution, and brawny muscle. The minute had come.

"My friend, if you will excuse the liberty, I want to protest against such talk. The day will surely come when God will lay you low and helpless."

I can not remember what more I said to him, but it seemed well chosen, for he gave no unkind answer back; and although we talked pleasantly on different matters, he used nothing like an oath again that afternoon. As the vessel rounded to the wharf, the captain came up.

"I tell you, sir, I am glad you gave that man that talking to; he is one of the best men I ever had, but that is his great fault. Why, I have talked and talked—" (Here I gave him a surprised look, for I thought he was a *little* that way himself;) "oh, yes! I use some few words, but not like him; and, sir, it isn't right; we'd better all stop. I am *awful* glad you talked right up to him. Why, he never swore a word after that, all the afternoon, and that is some thing I never knew to happen before."

Now, was it not wonderful? Instead of getting a rebuff, I had got thanks from the captain, and a promise—voluntary too—to do better himself. Please do not think I have told this boastingly, my friends, but that you might learn a lesson of trust in God, and that we may all safely put in a plea against this great national sin, and without much danger of awakening any unkind feelings either. I love thy tabernacles, O Lord, and I do love to hear thy holy name spoken with reverence and respect by the children of men.

ALBINO BEES, ETC.

WHEN the friends have any thing they would like me to see and report on, I shall be most happy to receive it, and will report to the best of my ability; but the fact of my having received a nice present, I hope will in no way influence me in reporting for the benefit of the public. Friend Valentine has very kindly sent me a nice nuclei of his so-called Albino bees. With his letter advising us of their shipment, comes his circular, from which we extract the following:—

> DESCRIPTION OF THE ALBINO BEES.
>
> As to their marking, the difference between them and the pure Italian is very striking. About the eyes they approach nearer a purple than that of the Italian. Beginning at the waist, they first have three distinct yellow bands, then three distinct white bands — the white is pure, not muddy and dirty; the wings are finer and of a bright silvery color. What makes them so beautiful is, the colors are bright — the white is white, and the black is black, etc. Their shoulders and the under part of the abdomen are very thickly coated with white hair. The queens are large and beautiful. They are a bright reddish yellow, and generally have the white hair, as described, in the workers. As to their breeding, I can say the queens are very prolific.
>
> S. VALENTINE, Double Pipe Creek, Md.

Now, I do not know but that the bees look to friend V. just as he describes them; but I can not agree that the difference between them and Italians is very striking. They have the three yellow bands, quite plainly, but the white bands are, as I have said in the A B C, simply bands of whitish hair or down. In some species of hornets we see a clear plain white band, but there is certainly nothing of the kind on these. They are nice, pretty Italian bees, that strongly resemble the Holy-Land bees, only they are a trifle whiter and a trifle larger, perhaps. Of course, they may be superior as honey-gatherers; but I can hardly see how selecting them for their light down should make them any better, any more than it would make hens any better layers by simply breeding from the white-feathered ones out of a flock of all colors. It was once thought that fowls with feathers on their legs were superior in other respects, but I believe the fancy has been mostly dropped. They are very pretty bees, and transmit this white downy appearance to each generation, as I proved by those I had of friend Pike a few years ago.

MR. MERRYBANKS' NEIGHBOR.

ALSO SOME THING ABOUT HOW THEY ARE GOING TO FEED THEIR BEES IN ONIONVILLE THIS FALL.

JOHN'S father had a little piece of land, which he cultivated after a fashion, when he had no other work on hand. He had this year got it planted to corn, and the corn was up so as to need cultivating. To do this, he must borrow a horse; but, strangely, this year everybody wanted to use their horses, or else they had not much sympathy for a man who seemed to take life so very easily, and so the corn was growing up to weeds. His wife gently remonstrated; but he replied that, as no horse was to be had, he did not see how the matter could well be helped, and so kept on smoking his pipe quite complacently. This was very trying to her, and even John urged that they should go at it and hoe the corn without cultivating.

"Why not buy a horse, father?"

Sure enough; why not buy a horse, and be independent of these pesky neighbors, who never cared whether they accommodated a body or not. But where was the money? He sauntered off, and before night returned with the information that he had found a horse, and the man would give him time on it, with one condition. The condition was, that their little home should be mortgaged as security. John's mother had been praying for their little family, oh how earnestly! but she could see no answer to prayer in all this. Knowing her husband as she did, she had little hope that the money would ever be raised. Still, as John and his father both talked of how they could get lots of work to do, if they only had a horse, she finally consented. The horse was purchased, and the cultivator was started; but, somehow or other, before the field was half gone over, even one way, the horse was turned out, and our friend sat in the yard smoking his pipe as in times past. It did not matter how busy the birds were building their nests, nor how eager the bees were in gathering the pollen from the early sweet corn that was already beginning to tassel, nor how busy the rest of the town were in their gardens, cornfields, and meadows, this man sat and smoked his pipe all the same. His poor wife was trying in vain to remember some passage in her little Bible that would give one comfort and cheer in a time like this. She remembered some passages in the Psalms that had always before seemed strange and unaccountable to her. Here was one of them:—

> Hear my prayer, O Lord, and let my cry come unto thee. Hide not thy face from me in the day when I am in trouble: incline thine ear unto me; in the day when I call, answer me speedily.—Ps. 102:1, 2.

Was it all this trouble that was beginning to show her how David felt when he said, "Hear my prayer," "hide not thy face," and "incline thine ear"? Was it possible that God knew all this trouble would result in her own good, if she took it in a way that sent her to him as her only refuge in the time of trouble, with a faith that made her prayer importunity? If so, O Lord, thy will, not mine, be done. And then she read the following verses from the same chapter:—

> But thou, O Lord, shalt endure for ever; and thy remembrance unto all generations. He will regard the prayer of the destitute, and not despise their prayer.

After this she felt that in some way deliverance was coming; so she went on with her work with a trust in that promise that he would "regard the prayer of the destitute." "I will do just the best I can, and be not troubled," she said to herself.

Just here the doctor drove up in his gig, and, meeting friend Merrybanks, who was going in the opposite direction, asked him how he should feed his bees after basswood had ceased. The doctor, the shoemaker, as well as John's father, had all increased their bees in order to fill their empty hives, and save their combs from the moth. They had also secured some comb honey, but many of the colonies were weak in bees, and almost all of them needed stores. As the shoemaker did not live far off, he saw the three talking, and came to hear what it was all about; so friend M. had an opportunity of talking to them all together.

MR. MERRYBANKS TELLS HOW TO FEED BEES THE FIRST OF AUGUST SO AS TO GET THEM IN THE BEST POSSIBLE WINTERING TRIM.

"My friends, we must take into consideration that, although we seldom have honey enough after this time for bees to build up to the best advantage so as to be ready for winter, we usually have some honey; and we do not want our feeding to stand in the way of having the bees get all they can from natural sources. I once fed a weak nucleus about 40 lbs. of honey in the fall, to build them up to a strong colony, which I succeeded in doing, but they stuck to the feeder all day long, to the entire exclusion of going to the fields; and as the fall happened to be one when bees worked on the second crop of red clover, I had others that, during the same time, built up of themselves, and even gave us some honey in surplus boxes. The feeding was not only an expensive operation, but it was really a damage to them, for it got them finally so they would not work at all, unless it was to bring in the little pollen they needed. If you want to make these colonies which are poor in bees and stores winter, it will by no means answer to say we will let them take their chances. If the yield of honey stops for only two weeks, it will cause the queens to cease laying, to a great extent, and old queens will sometimes stop almost entirely. The yield of honey is most favorable for brood-rearing when it comes just fast enough to cause the bees to build a little snow-white comb along the tops of the frames. You all know what this is, when you see, by turning the mat back, this thrifty white look on the combs, just over the center of the brood-nest."

Here friend M. gathered up his reins, and was about to go on; but they almost with one accord begged him to tell them *what* they should feed.

"You wish to use some thing that will be the safest and best for winter stores, and no mistake about it?"

"Yes, sir," said they almost all at once.

"Well, then, use granulated sugar, and

nothing else," and he prepared to start again.

"But, hold on a minute," said John's father; "*how* shall we feed it?" You see, he always had an eye out for the labor to be performed, and wanted just the very easiest way.

"Oh, yes! and I had almost forgotten to say that I would feed only at evening, and just so much as they would take up at night, and no more. I never want to see bees hanging around feeders during the day time. Neither do I like to see feeders around in sight in the day time to entice robber bees and flies to hang around them, attracted by the scent of the sugar they had contained the night before. I do not feel as much like advising candy as I did a few years ago, on several accounts. It is true, it is but little trouble; but if the bees take it as fast as they should, they have to be constantly bringing water from somewhere. Besides, it crumbles down, and grains of it get out around the alighting-board to attract flies and robber bees as before. Worst of all, it is pretty hard to so manage it that, when it is all used up, the bees will not have a comb built in its place. Frames having a little piece of comb in them, to be bundled about in the apiary, are not what we want. The small supply that the bees need, to enable them to build up to the best advantage, must be given regularly; if you miss even one or two days, it will show a break in the amount of eggs laid. You also wish to keep so sharp an eye on the proceedings that, should natural stores commence to come in at any time, sufficient for the purpose, you can stop right off short, for we do not wish to waste sugar unless it is absolutely necessary. I think I would use a Simplicity feeder, and either place it on the outside of the division-board, or on the top of the frames, turning back the mat enough to let the bees to it. If handier, just fill the feeder with the granulated sugar, and then pour on water from a coffee-pot whenever you wish to feed them. The amount of water poured on will determine the amount you wish to give them. When you wish to fix them for winter I would put a division-board in each side of the hive; this will leave room for 6 or 7 brood-combs, and I would not attempt to winter a colony that would not cover pretty well at least six combs. Fix the combs as you wish them to remain over the winter; see that the queen is laying, then cover them with a mat, having a two-inch hole cut through it right over where the center of the brood-nest comes. This hole can be quickly cut with a two-inch punch, such as tinners use. In fact, you can cut quite a number at once. Put on the mat, and set your Simplicity feeder right beside this hole. This should be arranged about the middle of September. Now feed them until they get every thing waxed up solid. Feed them so that the swarm can not possibly get over to any side of the hive where there are no sealed stores, for the brood-nest is in the center, and sealed stores are all around them a solid wall of food, and pure, wholesome food too. If you leave the hole in the mat open all winter, you will have about the same conditions of those who leave sections on all winter. If you think there should be some thing in the upper story to keep them warmer, fill it with forest-leaves. If you don't like that way, put in your usual chaff cushions. If you have got the bees in plenty, so as to crowd out of the hive, unless it is pretty cool, and an abundance of pure sugar stores, they will probably winter well almost anywhere. Git up, Dobbin! I have stayed too long already."

"Just a minute more," said John's father. "About how much sugar will it take to fill them all up in this way?"

"If they have no stores to speak of August first, but good combs, it will take from 20 to 25 lbs., perhaps. Git up!"

"Please, just one thing more: Can't we get along without buying feeders?"

"Why, come to think of it, I do not know but that you can. Just spread the sugar all around the auger-hole, and then drop on as much water slowly as you can without having it run down into the hive too much. When the bees have licked it dry, wet it again. I once fed a colony thus for winter, and they came through nicely. *Git up, Dobbin!*"

Honey Column.

CITY MARKETS.

Very little comb honey is yet in the market, and prices are not settled. It ranges about 18@20c for light in single comb boxes. Old honey, large boxes, and dark, from 12 to 15c. Extracted is more plentiful, and brings 7@9c readily.

Beeswax—18@20c for light, and 15@17c for dark.

Alfred H. Newman.

Chicago, Ill., July 22, 1881.

We quote honey in neat packages as follows: Best white 1-lb. sections, 20@22c; do. 2-lb sections, 18@20c; best dark 1-lb sections, 13@15c; do. 2-lb. sections, 12@13c; fair clover, 2-lb. sections, 14@16c. Large sections 2c per lb. less than above prices. Best white extracted, 10c; do. dark extracted, 7@8c. We have received but few crates of new honey as yet. Above prices will be our quotations for new goods.

Beeswax we quote at 23@24c.

H. K. & F. B. Thurber & Co.

New York, July 23, 1881.

New honey is just beginning to arrive, and is selling at 18@20c for 1 lb. sections; 17@19c for 2-lb. unglassed, and 12@12½c for well-ripened extracted in tin cans of 30 to 60 lbs. There is a fair prospect for these prices to continue, as fruit is scarce; but of course all prices are subject to supply and demand, and not to the opinions of individuals; therefore they may change somewhat, as they are not fully settled. A. C. Kendel.

Cleveland, O., July 20, 1881.

New extracted honey comes in lively. Our commission houses are well supplied, and prices depressed consequently, as the demand for honey has not yet sprung up. Extracted honey brings 7@9c on arrival; comb honey, 12@15c.

Beeswax 18@21c. Chas. F. Muth.

Cincinnati, O., July 22, 1881.

I have a barrel of good honey. Where can I sell it? Muth don't wish to buy now. Who buys honey in Indianapolis or Chicago? D. A. McCord.

Oxford, Butler Co., O., July 14, 1881.

I have 6 bbls. of white-clover and linn honey, extracted. Any one wishing to buy, I will send sample and prices. J. B. Murray.

Ada, Ohio, July 16, 1881.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, AUG. 1, 1881

Blessed are the pure in heart, for they shall see God.—MATT. 5: 8.

BASSWOOD closed here about the 10th.

WE have to-day, July 29th, 4391 subscribers; a gain of 207 since last month.

IN my absence the cover to GLEANINGS was printed with the price of wax unchanged. Please read 21 and 23c instead of 23 and 25.

THE North-Eastern Bee Association of Maine will meet at Grange Hall, Dexter, August 11, 1881.

The National Bee-Keepers' Convention will meet at Lexington, Ky., Oct. 5, 6, 7, 1881.

I WOULD call especial attention to our two-quart covered pails for honey. They were bought last fall, before the advance on such goods, and at $7.00 per hundred are a bargain. They have riveted ears, raised cover, and hold exactly 6 lbs. of honey.

THE new Clark smoker is so much more efficient, so much cheaper, simpler, and handier, that I think it must eventually take the place, to a great extent, of those of a higher price. We shall soon discontinue making the Simplicities unless customers insist on having them.

DO not send us any more blacks or hybrid queens. We can at present use dollar queens at $60.00 per hundred, but do not know how long we shall be able to do so. We shall probably introduce the greater part of them into our own apiary, and if too many of them prove hybrids, we shall not be likely to want more of the same party.

THE preference for the thick-walled fdn., running from 5 to 6 feet to the pound, is this year greater than ever. As it is much less trouble to roll this kind than that with the thin light walls, we will, until further notice, furnish it at 35c per lb. We have a large lot of it piled up ready to fill orders, and have over three tons of nice wax ready to "fall back on." This kind of fdn. costs more per square foot, of course, but it does not sag, and the bees work it out much more readily than they do that with the thin light walls.

THE worst besetting sin that afflicts mankind, as it looks to me to-day, is, that they do not fulfill their promises. I am guilty with the rest of you, and the consciousness of it so galls me at times that I think I shall give up business and go out in the woods to live, where I shall not have to make any promises to anybody. I do not mean holding only to the letter of the promise, but to the *very spirit* of it. May God in his infinite love and mercy help us not only to be better in the future, but to make full and ample amends for our sins in the past!

IT will be observed that our friend Forncrook advertises having a patent that covers broadly "any section made of one piece of wood, of whatever description." I presume, of course, the Patent Office have granted him such a patent; but as sections made of one piece of wood are a very old idea, I fear he has wasted his money. Cook's *Manual*, even the first small edition, described such sections, and illustrates the plan of making them.

THE rubber plates still fail to elicit satisfactory words of approval from purchasers, although we can not see where the trouble is, in using them here. It is true, there is a difficulty as yet in using them for making fdn. on wired frames. The trouble is to avoid having surplus wax around the outside of the frame, without going to the other extreme and not having the sheet fill the frame completely. You see, we gauge the size of the sheet by the quantity of melted wax that is poured on the plate. Practice will doubtless remedy all this in time.

As usual at this season, there is much trouble in regard to delays in sending queens and bees. Perhaps charity is needed on both sides. Delays often cost purchasers money, I know; but all who order queens should remember that those who have them for sale do not guarantee to send them at any specified time. I do not know how they can well do so. Every dealer, however, should be prepared to return the money *instantly* when called for; if he does not do this, he should be promptly advertised as a warning. Once more, my friends: There is no advertisement in the world like sending queens and bees the very day you receive the order.

EXPRESS COMPANIES AS PURCHASING AGENCIES.

As the return charges on the money is an expensive feature in the C. O. D. business, we have made an arrangement with all the principal express companies whereby our friends may simply hand the money over to any express agent, desiring him to purchase from us whatever is wanted. By this means no money is sent at all, and therefore the expense of this is all saved. We get our pay here, just as if you handed it to us personally. This is for small purchases only, say a dollar or two; larger amounts better be expressed directly to us in the usual way.

A SMOKER FOR STOPPING THE USE OF TOBACCO.

SOME of the younger ones are asking for the highest-priced smokers, where they have used tobacco but a very little while. Others ask for only the smallest size, and offer to pay the postage besides. I think, my friends, we had better have it this way: Every habitual user of tobacco who will give me his written promise to use no more tobacco until he shall have paid for the smoker, can have one of our 50c ones, postpaid, or any other one, he paying the difference in price. This will make it fair all around. The new smoker is giving excellent satisfaction, and we prefer them in our apiary to any smoker made, at any price.

HERBERT A. BURCH.

SINCE our notice of last month, we have heard of but two cases where the bees have been sent, and one of them is mentioned in the Growlery. Friend B. was very much displeased at my notice, and I asked him to give me a list of all orders he had filled, or money returned. None has been sent at this date. The following came to hand in my absence, and was replied to at once on my return, to the effect that we should of course be glad to publish anything from him.

> Long-continued overwork has so far impaired Mr. Burch's eyesight, that he is unable to write to any one. Will you allow us space in your August No. for a reply to your strictures on our business? H. A. BURCH & Co.
>
> South Haven, Mich., July 15, 1881.

To-day we get the following:

> Your answer to our inquiry of July 15th has just reached us. We regret that you did not reply at once, as it is too late now to prepare an article for the August No. Mr. B. is still unable to do much writing. H. A. BURCH & Co.
>
> South Haven, Mich., July 27, 1881.

It don't look to me as though we wanted an "article," friend B. Your friends want their bees or their money, and I do not see how ill health or anything else should prevent your wife or friends, or the man who manages the apiary, from complying with such simple acts of courtesy and justice. I have been told Mr. B. has about 200 colonies, and, in fact, he says so himself.

The following is a list of those who have sent him orders, and who have not, as far as I am informed, received either bees or money, and they now get no answers from him:—

Jan. 21, 1881, R. Boylan, Ni Wot, Mich., $42.41.
May 4, J. M. Goodrich, S. Frankfort, Mich., $20.00.
W. D. Wright, Knowersville, N. Y., $10.00.
June, 1880, A. H. Brown, Tustin City, Cal., $3.50.
Apr. 4, '81, Z. D. Paddock, Albany, Ill., $18.10.
P. L. Williams, Sharon, Pa., $37.50.
R. Johnson, Tiffin, Ia., $40.00.
May 9, '81, R. H. Gagan, White Valley, Va., $10.50.
June, '81, Willet Dickerson, Ladoga, Ind., $14.00.
May, '81, Henry Knapp, Oxford, Mich., $5.00.
D. R. Shaver, Stratford, Can., $14.00.
Mch., '81, B. T. Baldwin, Oskaloosa, Ia., 59½lb. wax.
May 18, '81, H. S. Miller, Huntingdon, Pa., $18.00.
Same date, son of above, $3.50.
H. Dickerson, West Lima, Wis., $2.00.
L. M. Shumaker, Danville, Va., $2.00.
Byron Walker, Capac, Mich., $117.00.
May 15, '81, T. C. Davis, Pittsburg, Pa., $7.00.
June, '81, W. Dickerson, Ladoga, Ind., $14.00.

I agree to be responsible for my advertisers, and if Mr. Burch, or any other one, fails to send the goods, or return the money, I will pay back the amount as soon as it is determined that it can not be collected of such advertiser. It does not seem to me that I should be responsible for damages resulting from delays in filling orders. I choose to do this, because I think it will teach me to be careful from whom I receive advertisements; and our bee folks should certainly have some protection against losing their hard earnings in this way. With God's help, I expect to be able to bear such burdens as I may meet. Two individuals have written me, protesting against my injustice to Mr. Burch. One of them gave me some names from South Haven. If these gentlemen will come forward and guarantee that friend B. will make good the above amounts, they will prove friends in need and friends indeed.

Recent Additions to the

COUNTER STORE.

FIVE-CENT COUNTER.

Postage.]		[Pr. of 10,	of 100
2	Blanket Pins, per paper of ½ doz.....	40	3 50

Also good for shawl-pins. They are like a common brass pin, but 3 inches long, and large in proportion.

3	Cake-cutters, fancy, 6 different pat'ns*	30	2 50
2	Combs, Dressing, *good*, clear horn....	45	4 00
10	Clothes-Lines; 30 ft. long............	40	3 75
8	Cups, 1 quart, *exact* (for only *five cents*)	48	4 50
3	Fans, very pretty, to fold up, well-made	45	4 25
	Jelly or Honey Tumblers, ½ lb. glass cover..............................	48	4 50
4	Pans or basins, extra deep, 1½ pints a very useful size*..................	28	2 50
7	Pie-plates, Tin; just right for pumpkin pies, two sizes, 9 and 10 inch*....	33	3 00
2	Spectacle-Cases; Leather; excellent..	33	3 00
4	Tablets, Suitable for writing and counter-slips; on excellent writing paper	40	3 50
2	Thimbles, best German silver.........	47	4 50
7	Tin Pot-Covers, with ring, 9¾ and 11 in.	45	4 50
1	Tweezers and Ear-spoons..............	40	3 50

*Three for a dime

TEN-CENT COUNTER.

3	Carpenters' Compasses 4-in., *steel*.....	95	9 00
	Dressing for the shoes, 4-oz. bottles..	85	8 00

An excellent thing to make your shoes look "new" when you want them to look presentable for Sunday-school, and have but little time.

	Lamp hand, no burner or chimney...	85	7 50
	Match-safe, beautiful pattern, handy.	75	7 00

Above is glass, after the "picket fence" pattern so much now in vogue.

4	Hose, Ladies', both white and colored; excellent goods	85	8 00
10	Inkstands in bronze and glass; handsome and useful....................	85	8 00
8	Pokers to stir the fire, tinned iron, wood handle, *nice*	75	7 00
10	Wash Basins, 10 in., *re-tinned*..........	85	8 00
5	Testament, new revision	95	9 00

Clear plain print, paper cover.

FIFTEEN-CENT COUNTER.

12	Coffee-pots, 2-quart.................	1 10	10 00
24	Dish Pans, 8 qt. with handles	1 80	17 00

This is the pan used for our 30c Wax Extractor. It also forms an excellent pan for mixing bread, with the addition of a nice, strong, well fitting, sloping cover, which costs 10c more.

12	Oil Cans, 2 qt., real nice; well made	1 25	12 00
12	Pans, Milk 8 quart, a good large pan and *re-tinned*	1 25	12 00
28	Wooden Bowls, 14 in. in diameter...	1 25	12 00

GLASSWARE.

	Butter Dish, Albion pattern, no foot	1 30	12 50

A very nice piece of work for the price.

Twenty-Five Cent Counter.

15	Coffee Pots, 6 qt., "Whopper"......	2 10	20 00
25	Pails, Tin 6 Quart, with cover, Plain	2 00	18 00
3	Spoons, Table, German Silver, Hall & Elton's well-known make........	1 75	15 00
	Stew pan, *glazed stone ware*.........	1 75	16 00

Can be set right on the stove without injury, has a bail to lift it by, a most useful utensil.

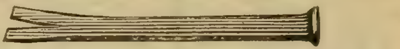
GLASSWARE.

	Honey or Butter Dish, Albion pattern; new pattern, something like a butterfly and wonderfully pretty	1 75	15 00
	Lamp, Glass, Hand, complete	2 25	22 00

Thirty-Five Cent Counter.

12	Balance, with Tin Dish..............	2 75	25 00

Suspended by 3 chains; 24 lbs. Chatillon's make.



18	Box Chisels...........................	3 00	28 00

A most handy tool for opening boxes, and for taking apart box hives in transferring.

17	Coe's pattern Wrench, 8 in., *wrought*	2 40	23 00
	Stew pan, *glazed stone ware*, same as on 25c counter, but larger..........	2 75	25 00

FIFTY-CENT COUNTER.

	Coe's pattern Wrench, 12 in. *wro't*..	4 00	35 00
45	Pails, tin, covered, per nest.........	4 00	35 00

A nest of five sizes, viz., 1 pt., 1 qt., 2 qt., 3 qt., and 4 qt. These pails have raised covers, and are very cheap and handy.

ONE-DOLLAR COUNTER.

5	Labels, gummed, per 1000............	5 00	40 00

At this price they are to be one color, not to exceed 1 x 2 inches in size, nor 50 words of matter, and not less than 1000.

A. I. ROOT, Medina, Ohio.

At Kansas City, Mo.,

I breed pure *Italian* bees for sale. I warrant my "Dollar" queens to be mated by pure yellow drones, and guarantee safe arrival and perfect satisfaction.

Tested Queens, - - - - - - - $2 00
"Dollar" " - - - - - - - - 1 00

Please address all letters plainly to
6tfd E. M. HAYHURST, *P. O. Box* 1131.

HOLY-LAND & CYPRIAN QUEENS!

Raised in separate apiaries 5 miles apart. Untested Queens of either race this month, $1.50.
H. B. HARRINGTON, Medina, O.

ONE-PIECE SECTIONS A SPECIALTY.

Pound and Prize size, $4.50 per 1000. Sample section free. BYRON WALKER,
Capac, St. Clair Co., Mich.

Buy the Best

The best-informed bee-keepers in the U. S. say that our DOUBLE-DRAFT QUINBY SMOKER is decidedly the BEST now made. Hetherington discards all others, and orders two dozen for his own use. Doolittle says it is not equaled. So say all who see and *use it.* Price, by mail, $1.50 and $1.75.

OUR BOOK

QUINBY'S NEW BEE-KEEPING

continues to grow in popularity, and is the most practical work published. Price, by mail, $1.50.

We sell every thing used in advanced Bee Culture. Send for Illustrated Circular to

L. C. ROOT & BRO.,
7tfd **Mohawk, N. Y.**

HENRY ALLEY,

Wenham, Essex County, Mass.

4 RACES OF BEES. 4
ITALIAN. HOLY-LAND. CYPRIAN AND HUNGARIAN.

Read what my Customers say:

Please send me three queens; I do not like those little queens sent me by other dealers. Those you send me are a real improvement to my apiary.
DuQuoin, Ill., 1881. DR. W. ARMS.

I have one queen from H. Alley, that $25 would not tempt me to sell, and she cost me only $1.
Austin, Minn., May 6, 1881. F. A. TICKNOR.

From American Bee Journal of May 25, 1881: My bees are all Italians, and wintered without loss on summer stands. AMANDA PARSONS.
I furnished this lady all the queens she has.

The queens you sent me are the very best I ever bought, and their worker progeny the nicest I ever saw. J. H. WALLACE.
Lucas, Ohio, August 10, 1880.

I have the finest swarms that can be found anywhere, from the queens you sent me this summer.
Cobleskill, N. Y., Sept. 23, 1880. B. VANWIE.

Your queens are well thought of here; one of my neighbors has one that he declares he would not sell for $150. GEO. D. ELDERKIN.
Chicago, Ill., Sept. 27, 1880.

Queen received in fine shape, and as lively as a cricket. She is the prettiest queen I ever bought of any dealer; in fact she is as nicely marked as I ever saw. WM. H. GRAVES.
Duncan, Ill., Sept. 25, 1880.

Send for 20th circular and price list of Apiarian Supplies. Warranted Queens of any race, $1 each; Choice Queens, $1.50; Tested, $2 each—all by mail, safe arrival guaranteed. Bees by the pound, and Nuclei hives for sale in Langstroth frames.

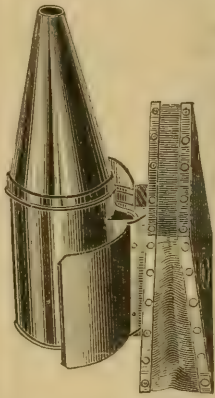
HARKNESS' MODEL FEEDER

will enable you to feed your bees at any time of the day or year without removing either frames or mat, or causing the bees to rob. A sample, with full instructions for using, sent to any address, postage paid, for 25 cents. J. W. HARKNESS,
8d Keeseville, Essex Co., N. Y.

FULL COLONIES
OF
ITALIAN BEES & QUEENS FOR $1.50!

Our honey season closes Sept. 15th, and after that I propose to dispose of some 200 colonies. Will guarantee delivery at above prices. Early correspondence solicited. Address C. D. WRIGHT,
8-9d Baxter Springs, Cherokee Co., Kan.

LETTERS.

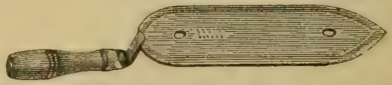


OXFORD, O., June 29, 1881.
Messrs. Bingham & Hetherington, Abronia, Mich.

Gentlemen:—Your Uncapping Knife has been well tested in the apiary of Mr. D. McCord, my neighbor. In his opinion, and I agree with him, it is far in advance of any knife which he has used.
Yours very truly,
L. L. LANGSTROTH.

Sunny Side, Napa, Cal., June 10, 1881.
T. F. Bingham, Abronia, Mich.

DEAR SIR:—Please send me by mail two Large, six Extra, and four Standard Bingham smokers. Your four-years-old smoker is still in use, and does good service; the only trouble being, it is too small. I require the Large size. I have a Large and Small Quinby; Small one condemned; the other I got along with by repairing often. As far as I have tried them, I prefer yours above all, and shall keep them in stock.
Yours truly, JAS. D. ENAS.



Parties wishing to order, will please refer to July No. GLEANINGS, page 362, for description, etc.
BINGHAM & HETHERINGTON,
8tfd Abronia, Allegan Co., Mich.

SECTIONS.

JAMES FORNCROOK has received his patent on the "Boss" All-In-One-Piece Section, heretofore called the "Lewis" Section, dated June 28, 1881.

TAKE NOTICE.—The patent covers any section made of one piece of wood, of whatever description; therefore, we hope manufacturers and dealers will govern themselves accordingly.
8d JAMES FORNCROOK & CO.
Aug. 1, 1881. Watertown, Jeff. Co., Wis.

Cyprian Queens!

CYPRIANS ONLY!

GOOD ONES FROM FULL COLONIES, BRED FOR BUSINESS, FOR PURITY.

From Jones' Importation. Safely delivered for $3 each and ready. DR. WM. M. ROGERS.
8d Shelbyville, Shelby Co., Ky.

QUEENS. ITALIAN QUEENS.

Tested Queens	$2.00
Untested Queens, in August	90
Untested Queens, in September	75

Safe arrival and satisfaction guaranteed.
Address GEORGE W. BAKER,
8 Lewisville, Henry Co., Ind.

CHOICE ITALIAN BEES AND QUEENS.—Bees by the pound, $1.00; Dollar queens, 90c; Tested, $2.00. Ten-frame colonies in Simplicity hives, $5.00. Add price of queen wanted. Dunham Fdn. 35c per lb. Warranted pure. F. W. HOLMES,
8d Coopersville, Ottawa Co., Mich.

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I CAN furnish Bees by the colony and pound. Send for special rates. H. NEWHAUS,
9-10d Burlington, Racine Co., Wis.

LARGE CHAFF CUSHIONS

For winter, without chaff, for Simplicity and Root chaff hive, $12.00 per 100. Two by mail, 30c.
D. S. BASSETT,
9d Farnumsville, Worcester Co., Mass.

50 STOCKS OF ITALIAN OR HYBRID

Bees for sale, either by the hive or pound, in any quantity to suit purchasers. Address, for particulars, J. J. KISER, E. Des Moines, Iowa.

ITALIAN Raised from a pure mother, untested, **QUEENS** laying, 75 cts. each; tested, $2.00; Safe arrival guaranteed. FRED. G. MIELKE,
9d Windsor, Dane Co., Wis.

Recent Additions to the

COUNTER STORE.

FIVE-CENT COUNTER.

Postage.		Pr. of 10,	of 100
3	Book or Shawl Straps, very handy....	35	3 25
2	Ivory Tooth picks, 3-bladed..........	38	3 50
	GLASSWARE.		
7	Salt Cellars, Frog pattern..........	45	4 00
10	Mugs, brown, flint glass enameled...	40	3 50
	Bowls, brown, flint glass enameled, Splendid for bread and milk....	40	3 50

TEN-CENT COUNTER.

Postage.		Pr. of 10,	of 100
5	Feather Duster..........	85	8 00
8	Milk Strainers, pretty and useful....	85	8 00
	GLASSWARE.		
	Bowls, brown, 8-inch, flint glass enameled..........	75	7 00
2	Pen, to write with Clear water........	75	7 00

Beautifully finished in Jet and Nickel, writes beautifully. Ink supplies, same price, for a box of 3.

FIFTEEN-CENT COUNTER.

Postage.		Pr. of 10,	of 100
2	Lace cutter, a *most* handy tool for cutting strings for lacing belts....	1 35	12 00

Twenty-Five Cent Counter.

Postage.		Pr. of 10,	of 100
50	Washboard "O K" Double.........	1 75	15 00

This is a nice, light, good washboard, and with each one goes a very pretty and useful little receipt book.

A. I. ROOT, Medina, Ohio.

ITALIAN QUEENS!

Italian queens (untested) 80c; full colonies, ready for winter (untested queens), $6.00. Can ship immediately. H. BARBER, Adrian, Len. Co., Mich. 9d

50 FINE COLONIES of Italian Bees, with tested queens, at $7.00 each. Tested queens, $2.00 each. A few colonies of good hybrids with queens at $6.00. Address O. H. TOWNSEND,
9tfd Hubbardston, Ionia Co., Mich.

ITALIAN QUEENS!

Tested queens, $2.00. I have a fine lot of untested queens on hand, which I will send, by return mail, for 75 cts. each. All my queens are reared from imported and home-bred queens. Send in your orders to GEORGE W. BAKER,
9d Lewisville, Henry Co., Ind.

BLACK BEES,

50 CTS. PER POUND!

From this date I will sell the above bees at the above low price. These bees are obtained of parties who wintered their bees successfully. They are a hardy strain. Black queen with the pound, $1.00; or untested Italian queen, $1.50. Three-frame nucleus with untested queen. Two for $5.00.
Address J. H. MARTIN, Hartford,
9d Wash. Co., N. Y.

Razor Steel

THE BEST KNIFE MADE

For Farmers and Mechanics.

Blades extra thick, oil tempered, every one tested by file. Exchanged free if soft or flawy. Price postpaid, 75c, or 1-blade, 50c. Medium 2-blade, 50c, 1-blade, 25c. Illustrated list free. Butcher Knife, *best*, 6 in., 50c; Sticking Knife, 60c; Skinning Knife, 75c, postpaid. Please send for our free list. Address
MAHER & GROSH,
34 N. Monroe St.,
Toledo, Ohio.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Newark, Wirt Co., W. Va.	2-1
*A. I. Root, Medina, Ohio.	
*H. H. Brown, Light Street, Columbia Co., Pa.	7tf
*E. M. Hayhurst, Kansas City, Mo.	1-12
*Paul L. Viallon, Bayou Goula, La.	7tfd
*D. A. McCord, Oxford, Butler Co., O.	1-12
*S. F. Newman, Norwalk, Huron Co., O.	7tfd
*Chas. G. Dickinson, Sou' Oxford, Chen. Co. N. Y.	1-10
*Wm. Ballantine, Sago, Musk. Co., O.	7tfd
*W. H. Nesbit, Alpharetta, Milton Co., Ga.	7tfd
*J. O. Facey, New Hamburg, Ont., Can.	4-9
*H. Nicholas, Etters, York Co., Penn.	4-10
*John Conser, Glenn, Johnson Co., Kans.	4-9
*Fischer & Stehle, Marietta, Wash. Co., O.	4-9
*Jas. P. Sterritt, Sheakleyville, Mercer Co., Pa.	5-10
*V. W. Keeney, Shirland, Win. Co., Ill.	6-9
*C. B. Curtis, Selma, Dallas Co., Ala.	6-11
*T. W. Dougherty, Mt. Vernon, Posey Co., Ind.	7-12
*J. W. Keeran, Bloomington, McLean Co., Ill.	7-9
L. W. Vankirk, Box 178, Washington, Wash. Co. Pa.	7tfd
C. H. Deane, Sr., Mortonsville, Woodford Co., Ky.	8tfd

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.	
P. L. Viallon, Bayou Goula, Iberville Par., La.	1tfd
S. F. Newman, Norwalk, Huron Co., O.	1tfd
J. F. Hart, Union Point, Greene Co., Ga.	4-3

Foundation Manufacturers.

Who agree to make such foundation, and at the prices given, as described in our circular.

A. I. Root, Medina, Ohio.	
Jas. A. Nelson, Wyandott, Wyandott Co., Kans.	4-9

Bees by the Pound.

Those whose names appear below agree to furnish bees by the lb., and at the prices given in our circular.

I. L. Scofield, Chenango Bridge, Broome Co., N. Y.
S. C. Perry, Portland, Ionia Co., Mich.
J. P. Moore, Morgan, Pendleton Co., Ky.
W. R. Whitman, New Market, Madison Co., Ala.
Chas. Kingsley, Greeneville, Greene Co., Tenn.
C. D. Wright, Baxter Springs, Cherokee Co., Kans.
H. B. Harrington, Medina, Medina Co., O.
W. St. Martz, Moonshine, Clark Co., Ills.
G. W. Gates, Bartlett, Shelby Co., Tenn.
W. S. Canthen, Pleasant Hill, Lancaster Co., S. C.
J. G. Taylor, Austin, Travis Co., Texas.
T. P. Andrews, Farina, Fay. Co., Ill.
Allan D. Laughlin, Courtland, Law. Co., Ala.
E. J. Atchley, Lancaster, Dallas Co., Texas.
D. McKenzie, Carrollton P. O., N. O., La.
H. L. Griffith, Sumner, Law. Co., Ill.
J. H. Martin, Hartford, Wash. Co., N. Y.
W. A. Pirtle, Cabot, Lonoke Co., Ark.
E. T. Flanagan, Belleville, St. Clair Co., Ill.
J. K. Mayo, Stafford, Fort Bend Co., Texas.
J. F. Hart, Union Point, Greene Co., Ga.
B. Chase, Earlville, Madison Co, N. Y.
S. P. Roddy, Mechanicstown, Fred. Co., Md.
W. J. Ellison, Statesburg, Sumter Co., S. C.
R. A. Paschal, Geneva, Talbot Co., Ga.
A. Osbun, Spring Bluff, Adams Co., Wis.
H. D. Heath, Sherman, Grayson Co., Texas.
N. B. McKee, care of D. & D. Inst., Indianapolis, Ind.
J. B. R. Sherrick, Mt. Zion, Macon Co., Ill.
Otto Kleinow, opp. Fort Wayne, Detroit, Mich.
J. C. & D. H. Tweedy, Smithfield, Jeff. Co., O.

HEADQUARTERS IN THE SOUTH

For the Manufacture and Sale of

BEE-KEEPERS' SUPPLIES!

Italian Queens and Bees, all bred from mothers of my own importation. Dollar queens, $1.00. Tested queens, $2.50; 4-frame Nucleus, $5.00. Safe arrival and satisfaction guaranteed. Send for my illustrated catalogue.

PAUL L. VIALLON,
6tfd Bayou Goula, Iberville Par., La.

HILL SIDE APIARY,

ITALIAN QUEENS!

Untested queens, $1.00; Tested, $2.00; Selected, $3 00; Pound of Bees, Italian, $1.00; 2 Langstroth-frame nuclei, $2 00; 3 Langstroth-frame nuclei, $3.00. For prices of Novice Extractors, Veils, Smokers, Hives, &c., &c., address

WM. B. COGGESHALL, SUPT.
9 Hill Side Apiary, Summit, Union Co., N. J.

HEADQUARTERS FOR

Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new circular. Address

1tfd DR. J. P. H. BROWN, Augusta, Ga.

C. OLM'S COMB FOUNDATION MACHINE.

SEND FOR SAMPLE AND CIRCULAR.

5tfd **C. OLM,** Fond du Lac, Wis.

J. M. BROOKS & BRO'S

AMERICAN ITALIANS.

PURITY OF STOCK A SPECIALTY.

4-9 CIRCULARS FREE.
COLUMBUS, - BARTH. CO., - INDIANA.

1881 ITALIAN QUEENS! 1881

Tested Queens........$1 50
Warranted Queens.. 1 00
Cyprian Queens, untested 1 00

As most all the Dollar queens I sold last year were pure, I will warrant them this year.

J. T. WILSON, Mortonsville,
8-9 Woodford Co., Ky.

At Kansas City, Mo.,

I breed pure *Italian* bees for sale. I warrant my "Dollar" queens to be mated by pure yellow drones, and guarantee safe arrival and perfect satisfaction.

Tested Queens, - - - - - - - $2 00
"Dollar" " - - - - - - - 1 00

Please address all letters plainly to
6tfd E. M. HAYHURST, *P. O. Box* 1131.

Ha! Ha! Ha! Ha! Ha! Ha! Ha!

BINGHAM BEE SMOKER.

The first practical bellows bee smoker.
The first and original patent smoker.
The first never-failing bee controller.
The first direct draft bellows smoker.
The first to burn stove-wood and not go out.
The first durable bellows bee smoker.
The first to create a demand for smokers.
The first to meet the wants of bee-keepers.
The first cinder-proof bellows smoker.
The first twenty thousand now in use.
The first complaint yet to be received.
The first smoker yet to be returned.

Bingham & Hetherington
HONEY KNIFE.
The Best Cheapest Made.

The first thing for bee-keepers to do, to save imposition and money, and be happy and safe, is to send a card for testimonials, or half-dozen rates, to

BINGHAM & HETHERINGTON,
ABRONIA, MICH.

Blueberry Plants!

This fall I will furnish blueberry plants at $1.00 per dozen, by mail, or $3.00 per 100 by express. They are a good fruit, and easily grown on high ground, if mulched. DELOS STAPLES,
9 West Sebewa, Ionia Co., Mich.

BEES FOR SALE!

To reduce my stock, I will sell 100 colonies Italian and hybrid bees in 8 and 10 frame regular L. hives, well filled with bees, brood, and clover honey; 8-frame new hive for $7.00; 10-frame, $8.00, with Italian queens raised from imported mothers. Hybrids, $1.00 less. Put up in good shipping order F. O. B. Can send any time. Send cash with order.
9d D. G. WEBSTER, Blaine, Boone Co., Ill.

HIVES! HIVES!

I am now prepared to manufacture bee-hives, wholesale and retail at the very lowest prices. Send one dollar, to get one of D. A. Jones' celebrated hives. Catalogue furnished on application.
9-11d JOHN M. KINZIE, Doon, Ont., Can.

KIND READER! Do you want to buy queens? If so, give me a trial order. I am confident I can please you. **FINE WARRANTED ITALIAN QUEENS** a *specialty*. Prices: single queen, $1.00; per ½ doz., $5.50. All queens bred from choice imported and improved stock. Send for circular.
J. P. MOORE,
8tfd Box 27, Morgan, Pendleton Co., Ky.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Michigan,

Makes a *specialty* of rearing fine Italian queens. All queens bred from imported queens, and from the purest and best home-bred queens; and the cells built in full colonies. No black bees in the vicinity. Single queen, $1.00; six queens for $5.00; twelve or more, 75 cts. each. Tested queens, $2 00 each. Safe arrival by mail guaranteed. Send money by draft, registered letter, or by money order drawn on Flint, Mich. 6tfd

☞ He has a stock of queens on hand, and can fill orders *promptly*.

ITALIAN QUEENS! I am prepared to furnish pure queens at a low price. Untested, in May, $1.00; June, 90c; after, 80c. Send for circular.
CHARLES D. DUVALL,
4-9d Spencerville, Mont. Co., Md.

HOLY-LAND & CYPRIAN QUEENS!

Raised in separate apiaries 5 miles apart. Untested Queens of either race this month, $1.50.
H. B. HARRINGTON, Medina, O.

100 WARRANTED ITALIAN QUEENS!

From now until October 15th we will mail warranted queens. Single queen, $1.00; 6 queens, $5.50; 12 queens, $10.00; 250 queens, tested, at this date; 20 mismated. Our queens are meeting with favor in all the States and Canadas.
HALL & JOHNSON,
9d Kirby's Creek, Jackson Co., Ala.

500 POUNDS

Black and Hybrid Bees for sale, at $1.00 per lb., with Simplicity frame of brood and honey to each pound, and queen if 5 lbs. are taken.
C. H. BLYSTONE,
9d Meadville, Crawford Co., Pa.

CHAFF HIVES!

Persons having hives using the Standard L. frame, and wishing to winter in chaff, are requested to write for our circular and price list of Chaff Hives. We offer 10 per cent discount from now until Jan. Our hives are similar to those made by A. I. Root.
Address, S. C. & J. P. WATTS,
9d Lumber City, Clearfield Co., Pa.

KIND WORDS FROM OUR CUSTOMERS.

The $10 watch is at hand. It's a perfect beauty.
W. D. LOVELAND.
Lawrence, Mich., July 15, 1881.

I received the dictionary on the 4th. It is worth twice the money. E. HORLEY.
Hemlock, Ont., Can., Aug. 5, 1881.

I received my queens in splendid condition. They look as though they hadn't been out of the hive any time at all. You will hear from me again soon.
Owego, N. Y., Aug. 20, 1881. H. MORSE.

The labels came to hand a few days ago, and just suit me. I must commend you for your despatch. The other goods were all satisfactory.
WM. MUTH-RASMUSSEN.
Independence, Inyo Co., Cal., Aug. 12, 1881.

The cheirograph came to-day in good order. It far exceeds my expectations. At the first trial I could take off copies just as fast as I could wish to. Accept thanks. CHAS. H. KINCADE.
Sterling, Ark., Aug. 10, 1881.

In closing my account for the year, I need not remind you of the pleasure your promptness and fair dealing have afforded me. I do not wonder at your success in business. B. S. UNDERHILL.
Williamson, Wayne Co., N. Y., Aug. 17, 1881.

I think every number is worth almost the price of it for a year. I also admire your promptness in doing "biz." The smoker (Clark's) ordered of you came to hand two days sooner than I expected, and works like a charm. J. S. CARLILE.
Chester, Morris Co., N. J., Aug. 17, 1881.

The package of goods you sent me by express is at hand all right. The 24 lbs. "Favorite" scale is splendid — just the thing for weighing honey or any thing else within its range; every farmer's wife should have one for weighing butter, etc.
J. A. BOOKWALTER.
Wabash, Ind., Aug. 18, 1881.

I can not get as good a knife here for less than 30 cents each, and the glass-cutters cost here about 25 cents each. How can you sell them so cheap? I do not suppose you steal them. The knives are fine steel-bladed, and what will you think if I tell you I strapped one of them on my boot a little, and actually got a good shave with it? See accompanying orders for more goods. G. W. YOUNG.
Lexington, Mo., Aug. 10, 1881.

[We don't steal them, friend Y.; but by buying them by the gross we get them for a fraction less than 9 cents each. We shall not get rich selling them, you see, but a *good* knife for an even dime is quite an accommodation to the brethren.]

I received the magnetic tack hammer, and am well pleased; sold it; could not keep it. Please send me two more. C. C. Watterson.
Live Oaks, Bastrop Co., Texas, July 7, 1881.

I gave the Clark smoker a trial, and am convinced that I would not give it for two of any other kind. Its convenience makes it preferable; besides, it is better. Geo. Kinney.
Elkhart, Ind., July 23, 1881.

After a fair trial we are pleased with the Waterbury watch. We inclose $20.00, for which please forward, at earliest convenience, 6 more.
Bentley & Young.
Columbia Mills, Columbia Co., Fla., July 5, 1881.

Gleanings received. Please accept thanks. I sat up and read until past midnight before I thought it would be a month before I got another one.
D. S. Hall.
South Cabot, Wash. Co., Vt., July 23, 1881.

Here is two dollars, for which you will please send me a "crate of five" of those *extra* smokers. I have used one of your first make of them, and can recommend them conscientiously. A. A. Parsons.
Plainfield, Hendricks Co., Ind., July 29, 1881.

THE TEN-CENT SPECTACLES.

The 2 spectacles are received in good order. This part of the country will shortly become good customers for your spectacles as soon as they become known. Wm. Wittfeld.
Georgiana, Brevard Co., Fla., May 24, 1881.

I have always been pleased with what I have bought from you. May 7th I took 168 lbs. of new honey; *it was fine.* Was sorry to see your name in Blasted Hopes. I hope you won't be there long.
J. W. Traylor.
Mt. Joy, Delta Co., Texas, May 21, 1881.

I received my three queens all right, also the other goods. Every thing in good order. You will receive my very kind thanks for your kindness. I think I never saw any thing put up so nicely.
Edward Tunnicliff.
Kewanee, Henry Co., Ill., July 14, 1881.

WATERBURY WATCH.

The watch came to hand all right. I am well pleased with it. I think it is the best watch I ever saw for the money, and so think all my friends.
E. B. Skinner.
Fultonham, Muskingum Co., O., July 28, 1881.

THE 50C. SMOKER.

That new smoker is just an old engine. I don't see what any one wants to give $1.50 when he can get such a one as that for 50c. and postage.
V. W. Keeney.
Shirland, Ill., July 20, 1881.

FIXING BOOKS TO MAIL SAFELY.

I received the A B C to-day. It came through the mails in first-class condition. I think some of the booksellers might take a lesson from the way you fix those wooden strips around the edge to keep the cover from getting damaged. H. R. Duke.
Emsdale, Ont., Can., Aug. 5, 1881.

THE CARDS ON PROFANITY.

Accept thanks for those cards. I hope that through them I may lead some one to leave off this most depraved habit, as well as to impress on the minds of some of the little ones, that Jesus should always direct our words as well as actions. Several little girls who are in the habit of coming to my place of work have learned the one, and are to repeat it to me this afternoon. Geo. F. Williams.
New Philadelphia, Tusc. Co., O., Aug. 1, 1881.

I like my A B C book very much; at least I suppose you will think so when I say that and Gleanings have so occupied my evenings that I haven't been to the store an evening for a month or more; so you see it must possess very decided charms. I have got one swarm of bees now; the hive is *chock* full of bees and honey, so it is all I can do to lift it. We got them for $5.50 in a box hive. They have about filled a cap with honey. They are blacks, but are very gentle. I have been stung only once by them, and that is saying a great deal, considering how much I fuss and look at them.
Willie H. Birney.
Nelson, Madison Co., N. Y., June, 1881.

Your clerk is a jewel to send my order by freight, to thus save me expense. D. F. Hawley.
Alburgh Springs, Grand Isle Co., Vt., July 23, 1881.

[Why, friend H., it is *you* who are the "jewel." We have had more unkind words for disobeying orders, as we did in your case, than for almost any thing else. For instance, a man will order a thousand sections by express. We find, by looking it up, that the express charges alone would be about as much as the sections are worth. Now, the man may be well aware of this, and prefers to pay it rather than risk the delays on freight; or, what is most probable, he may have carelessly said by express, not thinking how heavy a thousand sections really are. Shall we obey or disobey orders? If we should wait until we could write him, the delay might cost him more than the value of the sections. We have found that we get the most thanks by taking it for granted that our customer has been careless; but sometimes we get a letter informing us that it is fair to presume a man who pays his money knows what he wants, and how he wants it. When we risk sending them as ordered, they often refuse to take them, and then we have a heavy express charge to foot ourselves. So you see why kind words like yours do us a great deal of good, friend H.]

KIND WORDS TO OUR CUSTOMERS.

My friends, there is one thing most sadly needed in business. It is especially needed by the boys and girls and men and women who have not been much in the habit of doing business, or who are just learning to do it. Our book-keeper says the best way she can define it is to say that you need to learn to be *short and clear.* Many of our large business houses are short, as we all know to our sorrow, but they are often any thing but clear. Our bee friends go so much the other way that they often write a long pleasant letter, but do not make the principal point clear then. The trouble is worse than you have any idea of. To illustrate: A man says, "Send me a thousand sections, 5x8. Don't delay a moment." This is short and clear, but it don't tell which of the two dimensions is to have the openings in, to let in the bees. It won't do to guess, and so we write, "My friend, you failed to tell us which were the tops and bottoms, and which the sides of your sections; please tell at once." Now, would you suppose anybody could fail to answer such a question? But they do, and quite often. Again, a man asked about some grooving-saws for making sections. We told him we could get him a set of new ones for so much, or that we would sell him a set that we had been using, at a much less price. He replied that we should send him, *at once,* so many saws of such dimensions; but nowhere in his letter was there any clew as to whether he wished old or new. We sent the new, and he was very much displeased, and charged us with not holding to what we had agreed to do. Another orders a thousand frames *at once.* After hunting up all the facts we could to determine whether he wanted all-wood or metal-corner frames, we send the former. He replies that he plainly ordered the latter, and that the former are subject to our order, as he can not use them. Nothing but sending back to him his own letter will convince him of his mistake. Do you say that such mistakes will happen, and we shall all have to bear with at least some such? Then by all means, friends, let us bear this in mind when we are tempted to speak or write harshly. We often get goods we *think* we did not order, but we do not write abusively, or at least not until we have found out what we did order. I'll tell you what helps: after you make an order, read it over carefully to see if you have told all that *must be* told.

ITALIAN AND ALBINO QUEENS,

Untested, bred from my choicest mothers. Italian queens, 75 cts. each; per half-doz., $3.50. Albino queens, $1.00; per half-doz., $5.00.
J. M. C. TAYLOR,
9d Lewiston, Fred'k Co., Md.

FOR SALE.--12 Colonies of pure Italian Bees in improved Langstroth hives.
Address, A. M. YORK,
9d 428, 15th St., Detroit, Mich.

GLEANINGS
IN
BEE CULTURE.

Devoted to Bees and Honey, and Home Interests.

Vol. IX. SEPT. 1, 1881. No. 9.

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.
Established in 1873.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE. Clubs to different postoffices, NOT LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

NO. 22.

WATER IN QUEEN-CAGES.

JULY 20.—How feasible some things look on paper, and how useless they prove in practice! For instance, I told you some time ago I intended to put up soft candy, something about like thick molasses, in the bottom of my queen-cages, and then cover it with harder candy. I have not yet made it a success. I filled some cages in this manner, and they looked all right until I began throwing them across the shop to see how they would stand rough treatment, when the soft candy just "busted" out in every one of them. I filled some more in the same manner, only I made the coating of hard candy considerable thicker. I did not "throw" these cages, but put some queens in them, and had them all ready to ship, when some thing detained me an hour or two, and, by that time, the soft candy was running from the cages. 'Twas lucky that they were not in the mail-bags, wasn't it? Well, before I could send the queens, I had to go and fill cages in the old-fashioned way, making the candy as soft as possible. I could not bear to think of using those tin bottles that you furnished last season, friend Root, because so many bees reached their destination daubed and dead. I was glad to see your explanation of the matter, in the last GLEANINGS, as the subject had puzzled me somewhat. Well, the ordinary candy, made very soft, seemed to answer every purpose until the hot dry weather came, when postals began to arrive that read about as follows:—

> "Those queens that you sent the 15th came to hand the 1[illegible]th, and I am sorry to say that, in two of the cages, both the queen and bees were dead. They looked to me as though they had died of thirst. How do you expect bees to live without water such weather as this? Please send me two more queens as soon as possible, as I have two queenless colonies."

I could see no escape from my troubles unless I went back to the plan that I adopted the first season that I shipped queens,—that of putting into the cage a dram vial of water, and stopping its mouth with a piece of sponge. I thrust a bit into the hole through which the queen is put into the cage, and bored a hole to the depth of half an inch, inside the cage, in the direction of one corner of the cage. A bottle of water was set into this hole, and a wire nail driven down in front of its mouth. The candy was now poured in around the bottle until just its "nose" stuck out. To make sure that the bottle would not be broken in the mails, I began throwing a cage across the shop. I threw it with all my might, and continued throwing it until I split the cage in two, but the bottle remained uninjured. You see, it is so imbedded into the candy that it can not be broken. Come to think of it, friend Root, just to show you how it is all arranged, I will send you a cage containing an untested Italian queen.

Aug. 3.—How dry and dusty it is! not a drop of honey do the bees seem to get; if this weather continues much longer, I shall certainly have to feed. GLEANINGS came last evening, and I don't know how many times Mrs. H. said, "Come, Will, don't you know that it's after ten o'clock?" I declare, it sometimes seems as though GLEANINGS is as interesting as those old-time love-letters used to be. And so other breeders have gone to using water in their queen-cages, have they? How we all do sometimes fall into the same groove, don't we, and at just about the same time too? Postal cards are now coming in thick and fast, and the best of it is, they all read as follows:—

"Queens came to hand last night in fine condition. Thanks for promptness."

Some of my customers object to the painted wire cloth upon queen-cages; and, as our hardware men keep no other, I *burn* off the paint.

Aug. 6.—A splendid rain.

Aug. 10.—Bees are bringing in their first buckwheat honey.

Aug. 12. The apiary is just roaring every forenoon. I have just been up stairs, where I could have the woods across the road as a background, and I was astonished to see the mazy "criss-cross" network that the bees made as they went and came from that two-and-a-half-mile-away forty-acre buckwheat field.

NUCLEI ON STILTS.

The nuclei in the Banner apiary are all on "stilts," and you have no idea how much easier and quicker they can be "tended." For the benefit of a lady reader of GLEANINGS, who asks in a private letter if I do not think that there is danger that the nucleus hives may be blown off their stands, I will say, that the hives are nailed fast.

EXTRA-PURE QUEENS.

Aug. 15.—Mr. M. B. Warner, of Cardiff, Onon. Co., N. Y., in a private letter to myself, says that friends Doolittle and Betsinger have, or have had, some queens that were so pure that the queens reared from their eggs would produce three-banded bees whether they (the queens) had mated with Italian or black drones. Mr. Warner says that he visited Doolittle a week or two ago, and friend D. told him that he (Doolittle) had two queens that he was rearing queens from that would do this. How is it, friend D.? There is one thing about this matter that puzzles me somewhat, and that is, *how* we are to *know* how a queen has mated, only as we judge by her progeny.

Aug. 16.—The water-bottle in the queen-cages is working finely. By using a two-dram vial, I have succeeded in sending queens to both Texas and California. It seems that bees need to drink during these hot days, just the same as other "folks" do.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

Thanks. friend H.; the queen came to hand in fine order. I am *quite certain* that painted wire cloth is just as good as any.

A REVIEW OF HAYHURST'S TEA-PARTY.

AS REPORTED IN AUGUST GLEANINGS.

BEFORE brother Salisbury went to that party, he, it seems to me, had been reading the Danbury *News* man's wrestle with a stovepipe, or the Detroit *Free Press'* report of the police court, and so he made himself merry at the expense of Cyprian bees.

As I have had two years' experience with Cyprian bees, and now have 90 colonies of them, I would like to "speak my little piece."

The good points of the Cyprians are these: They are very hardy, and stood the winter the best of any bees I had. They are very prolific, and will breed up early in the spring; they are not inclined to rob, and will not let other bees rob them. They are great honey-gatherers; work well on red clover, and at this present time are filling their combs with red-clover honey and pollen; and, lastly, they are the best-natured bees I ever worked with. They will never attack any one when their hive has not been disturbed, mind their own business, and will not buzz around your head when you are working with another hive. I have hitched my horse under a shade tree within 12 feet of a colony of full-blood Cyprians, and I never knew a bee to touch her; but if you kick over their hive, as friend Hayhurst did, they would be apt to pay you for it. The Cyprians have come to this country, and they have come to stay, and "don't you forget it." NEIGHBOR H.

Medina, O., Aug. 22, 1881.

NEIGHBOR H. ON FEEDING BEES.

THE "TIN-PAN" FEEDER.

AS September is the month when bees should be fed, if they need it, for winter, I will give my way, even if it is old, for winter feeding. I dissolve 3 or 4 lbs. of granulated sugar in 2 lbs. of water, and let it come to a boil; if there is any scum, take it off. Feed in the top of the hive, in a common milk-pan, covered with a piece of cheese cloth; leave it loose enough so it will reach the bottom of the pan when the bees take the syrup all out. Fix it so the bees can not get under the cloth, and you will not drown a bee. If you boil your syrup, and make it thick enough, the bees will seal it up the same night they are fed; but if left thin, and dissolved in cold water, they will not seal it until the water dries out in the hive.

I have, within the past few days, had them empty a pan in 5 hours. Tin pans cost only a dime, if you do not happen to have as many in the house as are needed, and you can hardly get a good feeder for any less. NEIGHBOR H.

Medina, O., Aug. 22, 1881.

A REPORT FROM CANADA.

ALSO SOME HOPEFUL WORDS FROM A YOUNG FRIEND OF OURS.

EDITOR GLEANINGS:—You have had no report from this part of Canada, to my knowledge, and as we intend to figure somewhat prominently in the "bee-keeping" future, I will try to put together a hurried report, to give you an idea of what we are doing.

Last season was much the same here as in other localities; "only about half an average;" there was a good flow of honey in the latter part, however, and bees went into winter-quarters in good condition, and came through with little loss. Our original bee-keeper in this immediate vicinity (who has kept bees in a "sort" of way for about 20 years) wintered 30 colonies the past winter, and sold down to 20 in the spring; has made about 2000 lbs., about one-third comb honey, and the rest extracted honey, and increased to 60 by natural swarming. Another neighbor commenced the season with 13; increased to 45, and made 1500 lbs. extracted. My father wintered 11 out of 12; sold 2 in the spring; increased to 28, and extracted 900 lbs.

And now for my own report:—

In the spring of 1880, when my father's bees began to fly (he had bought a couple of colonies the autumn previous), I became entranced with the little fellows, and then and there became a bee-man. I hardly knew a bee from a black fly. I knew nothing of yourself and GLEANINGS, or any thing else in the bee line; but, bees I would have. I bought a colony of blacks for $6.00; had two swarms; bought another first swarm, and made about 90 lbs. of honey from all. I took another colony from my brother to work on shares; wintered the five safely, and started out in April, 1881, to "make a business" of it. Bees were scarce, and very hard to get, and only blacks at that. I bought 9 more stocks, mostly in box and straw hives, some very weak, and some queenless. I transferred the whole "business" into new hives; bought a lot of foundation, and equalized them as well as possible, for clover bloom. I have bought, besides, 17 first swarms (all blacks), and now for results: I have extracted 1300 lbs. of first-class clover and basswood honey, and have to-day 55 colonies,—18 Italian, 11 Cyprian, 8 Holy-Land; the remainder will be "as the others" before the season closes.

Clover and basswood bloom was splendid; but since the latter closed, we have had little or no honey, partly on account of the hot, dry weather. My apiary has been so mixed all through the season that it's hard to give any figures as to results per colony; but I find, by a premature closing of my books, that they will show a net gain of 1400 per cent on net investment in the spring.

Next season the business will probably be in the hands of my brother (who is at present in your own apiary), while I "go to prepare" myself for a position in the social and apicultural world, which I shall leave to yourself to picture.

Now, friend Root, I can hear you say, "Very good, friend C.; but, go carefully; go slowly at first till you get experience." I promise you I will be careful, for I guess I know what care it has taken to put that little apiary in its present shape; yes, to build it up from nothing in six months; but to go slowly, never! I have a great many faithful advisers on this point, and I would say to all such who may read these lines, that with all due respect for your good wishes and greater experience, "Please, before you say further, come right here and step into my shoes." I have lived a quiet country life on my father's farm for twenty years; but that life is at an end now, and time is precious; time is money, education, influence, every thing, and time is short.

I keep bees, firstly, for the money that is in them; secondly and mostly, from a profound love of the great, the grand, and beautiful in nature and science. I have said nothing on the thousand and one different points pertaining to the scientific culture of the honey-bee, but I fear this little report is already too long; and, wishing you every success in your noble calling, I close for the present.

A. E. CALVERT.

Reaboro, Ont., Can., Aug. 16, 1881.

May God bless you, my young friend, in your enthusiasm; but still I can not but think it best for you to scrape up a stock of energy for the coming winter, so that, even if you should lose every bee, you will keep right on at work, all the same. By advising to go slowly, I do not mean that you should waste any time, by any means, but that you should be slow about investing beyond your means, or getting into debt. Go just as fast as you can, by all means, if you have every thing all paid up, and your colonies are good and strong for winter. I do not believe it will spoil your brother if I say a word about him, to encourage other young men to go and do likewise. He is in the apiary, busily at work from daylight until dark, every day in the week, and therefore has no time to "go up town," or lounge about anywhere. Of course, he neither drinks, smokes, swears, nor uses tobacco, and on the Sabbath he helps in the mission school at Abbeyville. His voice is also heard in our young people's prayer-meeting. It may be that, on account of his quiet ways and devotion to his bees that many in our town do not know of him; but nobody knows anything bad of him. If I am right, the world will know of all such young men in God's own time.

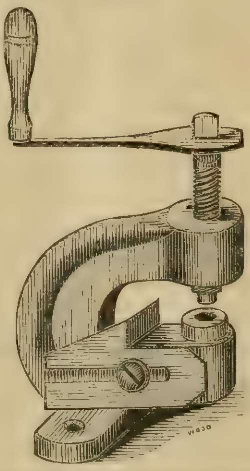
I presume the 1400 per cent was made by commencing with a small capital, and not counting your time, friend C.

A NEW TOOL FOR BEE-KEEPERS.

I SEND by this mail a sample press for perforating separators, subject to your alterations. I can furnish them to you by the quantity for 75c per press, and I think every bee-keeper would have one if he knew the value of it. I made my separators out of old tomato-cans, and perforated all of them; it will last a lifetime, if used rightly. I have already furnished the bee-keepers around here with one of my presses, and they all want me to have it patented; but I tell them you would not handle it if I did. Now, friend Root, I want a good big order. I know they will sell; and as well I would like to have an order for more saw-mandrels. WM. DEWORTH.

Bordentown, N. J., Aug. 12, 1881.

The machine is at hand, and we give you an engraving of it below:



MACHINE FOR PERFORATING SEPARATORS.

It is a splendid piece of work, and if friend D. will make such tools at the prices he mentions, he will build up one of the largest industries of our land. The machine cuts a circle of about 5-16, but it would easily perforate a hole as large as ½ inch, in tin. It does the work rapidly and well. I presume extra dies for different-sized round holes could be furnished cheaply. The postage on it will be about 25c. This will make it $1.25, postpaid. Orders may be sent us, or to friend D. I presume he ought to have an order for 100, to make them at this price; but I can hardly afford to order so many until we know how many want them.

Ladies' Department.

A THOUSAND TONS OF HONEY.

DEAR FRIEND ROOT: Your journal comes gliding into the parsonage every month, awakening no little amount of interest. At first I was disposed to lay them upon the shelf until they had accumulated in sufficient numbers to make a good fire some cold morning. *That, however, was averted.* I took up the first journal a few evenings after it had been received, and glanced over its pages. I became interested, and now look for its coming as I would for a friend. May the Lord bless you in your efforts to satisfy all the cravings of your numerous readers! also to bear the burdens which "Blasted Hopes" would place upon you from month to month. You are doing a noble work, and, I should judge, a self-sacrificing one, if I may judge from your liberality. I have just read the account of your visit to Detroit. Why did you not come to the northwestern part of Michigan? You have some very warm personal friends in this region. I have just returned from paying a visit to one of your lady friends. On entering her home she said, "You must excuse the looks of things to-day, for I have been very busy, and could not attend to my housework. Come, see what I have been doing."

She led me into a room. On the table was a large wash-tub, containing 150 lbs. of extracted honey. She then led me into another room, in which was honey in every kind of conceivable vessel. The crowning point to all surprise was a statement, made by the good lady, as follows: "I have extracted a thousand tons of honey this season, lacking half a pound." No wonder she had put honey in every conceivable vessel, from a broken tea-pot to an immense wash-tub. She meant to say a thousand pounds. Place her in the column of "Bright Hopes," if you have such in your journal. She commenced with five hives; now they number fifteen, all healthy and strong. She proves to be one of the most successful managers in bee culture in this part of Michigan, and a very warm friend of A. I. Root. JAMES DAVIES.

Atwood, Antrim Co., Mich., Aug. 16, 1881.

SOME one of you has sent us a beautiful sample of thin fdn., folded in a thin piece of dark paper. On the paper is printed, with cheirograph, "Thin molded fdn. for comb honey, 50c per lb." The sample has very nice side walls, on both sides. Who did it?

J. B. LAMONTAGNE, of Montreal, sends us a bee book in French. As we can only review it by looking at the pictures, about all we can say is, that it seems fully up to the times. The engravings are most of them from our modern bee-books, and the book has 188 pages and 100 engravings.

MR. MERRYBANKS and his neighbor is crowded out this month by other matter.

OUR copper wire, No. 25, is exactly right for telephones. Price per lb., 45 cents.

THE Burch matter has occupied too much space already. I hope you will excuse me for declining any more *articles* on the matter.

EVERY thing is drying up here, as it is with almost all of you, I suppose; but, strange to tell, the bees are still getting all they consume, and we get on with queen-rearing almost as well as we did at any time, although the queens are slower in becoming fertilized. I presume the honey comes from the seed crop of the red clover.

FANCY SECTIONS FOR HONEY.

HAS any one of you had good success in getting these filled, and do they look nicely when filled? I ask this because we sell a good many, but I can not remember that I ever had a report in regard to them; and if they do not please, I wish to take them out of our price list.

THE following is from the Cincinnati *Bulletin*:—

> If a bee is pinched by you, and stings you on the hand, remove the sting with your thumb nail, and suck the place between the lips, and don't halloo "Ouch!" like an idiot, or be so reckless as to thrust the same hand back among the bees immediately.

I should give the same advice, with the exception of omitting the sucking. It takes time, and does no good that I can see.

IT is a little amusing, nowadays, to have customers ask how soon we can send a queen. Why, my friends, we have had queens by the hundred waiting for customers, for the past six weeks. In fact, the clerks are standing ready to grasp each letter almost the minute it is out of the envelope, pleased at the chance of sending you by next train almost any article mentioned in our price list. Any one who is behind on orders in August or September ought to be ashamed of himself.

THE following from the *Indiana Farmer* is a little suggestive, and strikes at just about the real state of the matter:

> That the best honey in the most marketable shape will always bring the best price, has never been more fully exemplified than in a case which was brought to our notice a few days since. While down street, within a stone's throw of the *Farmer* office, at a fancy grocer's, two lots of honey were brought in. As for the honey, it was all very white and nice, but one lot was in a "skip" which held something over 20 lbs., and must be cut out and sold in chunks. The other 25 lbs. in 1½ lb. sections, all encased in a nice shipping-case. The latter brought 23 cents per pound, while the former lot brought only 12½ cents, and the grocer could hardly be induced to take it at that price.

OUR ingenious friend Scovell of Columbus, Kan., was the one alluded to in our last number, who invented the new way of grooving the Peet cages for the tins, at the same time friend Foster did. It is, in reality, the same thing as the cage I paid him $25.00 for a few years ago. Friend S. also sends us a plan for wiring frames, without the necessity of making any holes for the wire. Take a thin board, say ¼ or ⅜ thick, and saw grooves in it, as far apart as you want the wires. These grooves are to go just half through the board. Now rip off strips from this board, and you have places for the wires in each strip. The strips are of such length that one may be tacked under the top-bar, and over the bottom-bar of the frame. It is ingenious, but I think rather more work for us than our usual way.

THE EXPERIENCE OF A NOVICE IN BEE CULTURE.

CHAPTER I.,

IN WHICH HE TELLS HOW HE FIRST CAME TO KEEP BEES, ETC.

DEAR FRIEND NOVICE:—I have often thought of writing you a letter, telling you of my success as a bee-keeper, and how I commenced. I should have done so before, but thought to give the field to those more learned and experienced in the business. I was born and brought up upon a small farm in the town of Berne, Albany Co., N. Y. My parents were poor, and, living some way from a schoolhouse, I got but a very little education. When I was twelve years old I left the paternal roof and went out into the world to do for myself. I worked out by the month for a few years, and so my wages was not very high. I merely earned enough to supply myself with the necessaries of life. When I was 21 I got married, and worked a small place of about 60 acres of land for one-third, the owner finding tools. This business I carried on for three years, and at the end I was no better off than at the commencement; but in reality I was money out of pocket. At the end of three years I engaged to work a large farm in Schoharie Co. (where I now reside), belonging to a cousin; and after working hard, myself and wife, at the end of the year we were really money out of pocket. I concluded that there was no show for a poor man in the farming line, so concluded to try some thing else.

In the spring of 1877, the same year that I commenced to work the last place above mentioned, I saw an advertisement in some paper (I have forgotten the name of the paper now, but I think it was in the *American Agriculturist;*) the advertisement read like the following:—

> Dear Friend:—If you are interested in Bees or Honey, we will with pleasure send you a sample copy of GLEANINGS IN BEE CULTURE. Simply send your name, plainly written on a postal card, to A. I. ROOT, Medina, Ohio.

Now, I had been interested in the little honey-bees all my life. I used to watch them hour after hour as they came, loaded down with wax and honey, as I termed it then, for my brother-in-law, who used to keep a few bees in box hives, informed me that it was wax that they carried on their legs, and of course I thought the same; how should I know better then? but I know better now. Well, as I have said before, I was interested, and so sent my name to you, and in a few days received a copy of GLEANINGS. But I was much surprised when I got it; of course, my first thoughts were, after reading about frame hives and artificial combs, and machines to extract the honey out of the combs without injury to them, and about artificial swarming and queen-rearing, and all of this and that, that it was a humbug, and so I laid it aside; but every time I came into the house my mind was drawn to that "humbugging book," as I termed it, and the more I read it the more uneasy I got; and at last I concluded to purchase a colony of bees if I could. So in a few days I had some business to attend to in the further part of the town, and in coming home I noticed an old man carrying bees out of his cellar. As he had a good many swarms, I thought perhaps he might sell me one or two colonies; and so in a few days I had occasion to pass that way again. The old man was out among his bees. I drove my horses up near the fence, and, after fastening them, I opened a conversation with him in regard to his bees. After passing a few remarks in regard to them, I asked him if he would sell me a couple of swarms. He said that he would. I asked him his price, and he replied that he had some that he would sell for $4.00 a swarm, and some that he would not sell at all. I asked him to show me some of his four-dollar swarms. As the price through the country for black bees in box hives was five dollars a swarm, I thought perhaps here was a chance to get some bees at a lower price. The old gentleman turned up his hives, one after another, and I discovered at once that they were the culls of his yard; for so I learned afterward, that, in carrying them out of his cellar, when he came to one that was moldy, or a young swarm that had not the combs built down even to the bottom, or was light in bees, he had carried them all to this row. I told the old gentleman that the bees did not suit me, and that I would rather pay a larger price and get better bees. His reply was, that if those bees were not good enough for me, I might go without. So he finally left me, and went about his work. After he had left me, I took the privilege of examining some of his other colonies. I found them to be full of bees, and good bright combs, and looked as if they might be first-class stocks, although I knew nothing about bees. I looked at about all the rest of his colonies, and after making a careful examination I marked my name on two hives, then went where he was, and told him what I had done, and that I would give him eleven dollars for these two stands of bees, providing he would trust me for that amount until I could sell some farm produce. He said he thought that I did not want any bees, for they might sting me; so I left him and went my way.

In the course of a week or so the old gentleman sent word to me, that if I wanted those bees I might have them, and that I must come and get them that very day, or I should not have them at all; and at the same time I must give him security for the amount. As I wanted the bees very much, I of course went and complied with the old man's request. After getting them put up and into the wagon, he gave me some instructions in regard to their management. But, friend Novice, those instructions were never put in practice; for if they had, I never would have been the happy fellow I now am, for I found better instructions from a different source. It was from that little pamphlet that came from you—the one that I thought must be a humbug. May God bless you, friend Root, for sending it to me!

Well, what was the result of my purchase, and what did I do with the bees? Did I make bee-keeping a failure, and should I be put into Blasted Hopes? I will leave it for you to judge. I got my bees safely home, and placed where they could be seen by my wife while she was about her work, for she had to do the watching of them while I was away in the field at work. The 28th day of May, one of the colonies cast a large swarm, and in a few days the other followed suit, and the old man of whom I bought them did not have a swarm until the 6th of June; and in the fall I had 9 fine colonies in good condition for winter, and eleven dollars' worth of honey. So you see that my bees had not only paid for themselves, but I had for my work 9 good colonies of bees. The old gentleman now began to be a frequent visitor at my house. He told the story of my success to every one he met. He began to ask me questions concerning bees, when, in fact, I should have been asking *him;* for he had kept bees all his life. Well, as winter came near, I began to think how I was going to winter my little pets so as to have them all alive in spring, for I could not bear to think of losing any of them. I was not much posted in bee culture, for I had had no instructions except what I had got from the one copy of GLEANINGS, and I was too poor to be a subscriber and receive it every month; and as for any other book or paper pertaining to bee culture, I was as yet ignorant of it as a new-born babe; so when winter sat in I carried my bees all upstairs into an unoccupied part of the house—a room about 10 feet square, lathed and plastered. Although I wintered them all safely, I would never recommend any one to try to winter bees upstairs in a building of any kind. They seemed to do well until the warm days toward spring began to come, and then the room would warm up so as to make them uneasy; but, however, I wintered them all through, and commenced that spring keeping bees as a business. I rented a small house and about half an acre of land, and took up bee-keeping in earnest. Well, what is the result? To-day it is this: With just the purchase of 2 more colonies that spring, I have supported my family, which consists now of 6, one little girl 7 years old; one little boy 3, and a pair of twins, baby boys 8 months old. The little boy of 3 we have named Novice, and I send you his picture. In the fall of 1880 I had 60 full colonies and a few nuclei. With the exception of the nuclei, I wintered all safely, and think that I would have wintered them had I not been prevented, by sickness in my family, from getting them in shape for winter. As it was, I had to leave them out until cold weather, and then pack them up and move them about four miles, when the weather was so cold that I could put up only 2 colonies, and my fingers would be so cold and numb that I would have to go and warm them. As it is, I have yet to lose the first full colony of bees. I wintered one nucleus on its summer stand with only three frames of bees, without the loss of 50 bees. This I can prove. They were closed tight in their hive; for 150 days, not a bee saw daylight.

I can not tell you just how many colonies I have at present, for I am 300 miles from home in the State of Vermont, runing an apiary and queen-yard for A. E. Manum, the man who makes the white-poplar sections. I have been here since the 12th of May. My wife has charge of my apiary at home, and, besides, takes care of four children; so you see she has some thing to do—a family to look after, and about 100 colonies of bees. The last letter that she wrote she informed me that she had often got swarms out of the highest apple-trees by piling bee-hive caps on top of each other, and then setting the ladder on top of those. You see, I am trying to make bee-keeping pay in two ways, for I am anxious to buy and pay for a small home.

As to wintering bees, I have no fear. I give them water every day in winter, and am not afraid to take any one into my cellar at any time, and lift out the frame and show you the bees. I am not afraid of disturbing them in the least, for I can give you examples of fetching colonies from the back part of my cellar out into the light, and showing the bees to visitors in mid-winter; and further, let me tell you that I can show you lots of young hatching bees in my hives all through the winter. My bees have water in winter as regularly as my family have their meals. My bees came out so strong this last spring that they came very near cleaning out my neighbors' bees that were in good condition; and, in fact, did clean out a good many stocks of bees in the neighborhood. I wintered my bees in 1879 and 1880 in a ground depository that I built on purpose, with one end of the building exposed to the weather; and when one was inside, and the door shut, every hive could be counted; in fact, I could see to read coarse print; and from 50 colonies, not a four-quart measure full of bees were on the floor. In the spring they came out strong, and in fine order.

I see a great deal of writing in regard to wintering bees, and the greater part of it does not amount to the paper it is written on. Some say that bees must not breed in winter, as it will cause them to consume more food, and it will result in dysentery. The past winter, about the first of January I took out 8 colonies from different parts of the cellar. Every one of the 8 had two and three frames or sealed brood and young bees hatching. In March, about the first, I examined other stocks; they were breeding largely. Now this is no guess work, for I carried them out of the cellar, and took out the frames. I am not afraid to examine my bees, for I am one of the most inquisitive fellows you ever saw. Perhaps other bee-keepers have different bees from those I have. I am aware that bees want to be handled with judgment and care, and I am also aware that a great deal of bosh and trash is written in regard to them by men who know but little about them, but who think they know it all; for I have proof that some of our most scientific and practical bee-men who have the most to say (at least they claim to be scientific and practical) have the poorest luck in wintering, and are constantly losing their bees, and have no better luck than those who do not claim to be so scientific. Is it not so?

One thing I believe; that is, the destruction of hundreds of colonies in winter is because the owners did not know how to use the extractor, or else they knew how to use it too much, and did not know enough to stop. Let me give an illustration: A bee-keeper of my acquaintance extracted the honey from the center frames of his hives. As it was late in the season, they did not have a chance to fill up. There were two frames of honey at each side of the hives; in the center the combs were empty, but the owner supposed that the bees were all right; but every one that was in this condition perished, while those that were not extracted from came out all alive. This is only one of many similar cases.

I think I have been quite successful so far with bees, but I have done some hard work, and have lain awake a good many nights planning and studying how to manage them, and the best way to do. Last year I sent and got the A B C book, and got some good information from it. I am now a regular subscriber to GLEANINGS, and am very much interested in it. I love to read the Home Papers, and only find fault because you do not print them longer. Tell W. Z. Hutchinson that he is not the only bee-keeper who has a pair of twins to take care of; but I do not think ours are so much trouble as his, for my wife has taken care of them this summer, and a hundred colonies of bees to boot. I hope to be with my family soon, and take some of the cares off my wife. I expect to remain here in Vermont until the last of September. My bees are doing well at home, so my wife writes me, and I am glad to hear it. Is there any other bee-keeper who takes GLEANINGS who has left his wife with two little twins, and a hundred colonies of bees to take care of for five months as I have? If there is, I should be pleased to hear from him.

The bees here in Vermont have done very well considering the weather. Basswood was not a very big crop; it lasted but a few days. The honey season closed here about July 20. The most that any one colony gathered was 275 lbs. of white honey; the next best was 200. This was in the yard that I had charge of. These colonies were not allowed to swarm. If the basswood had been first class, as it is some years, I would have secured 400 lbs. of white honey from the best colonies, in 2-lb. sections. I use all top-storing; no side-storing for me. I had this hive tiered up one foot higher than my head, and I am 5 feet 8 inches with my shoes on. If any one can give a larger yield from any one colony from the first of June until the 20th of July, in sections, I would be glad to hear from him. If any one should wish to have my method in giving water to bees in winter, and how I have managed to get 275 lbs. of white honey in sections, I will give it in GLEANINGS if the editor will give room.

In conclusion, I would say to those who intend to make bee-keeping their business, to commence on a small scale, and with the determination to make it a success. Work hard, both with hands and brains, and do not rely on forty different plans of management, nor swallow every thing you read and hear, but use your own good judgment, if you have any, and good common sense; and if you are not possessed with a good amount of these, you had better keep out of the business.

I have seen many a dark day in battling with the world. I have always tried to make some point, but never succeeded in any thing until I began the bee business; and if I had not happened to come across your advertisement, and that copy of GLEANINGS, perhaps I should have been struggling with the world as I was in days gone by. I always liked to be around bees, and often, when a boy, used to catch bumble-bees and put them into a hollowed-out pumpkin for a hive, but I never got a chance to have bees, nor do I think I should have them now if I had not learned of you in the way above mentioned.

FRANK BOOMBROWER.

Gallupville, Schoharie Co., N. Y., August, 1881.

May the Lord bless you for your kind letter, so full of kind words, and energy and zeal for our favorite industry! May I suggest here (as a caution), that it was probably not because apiculture is a better business than farming, but because your whole soul was in it from the first? I know just how you took that little pamphlet up and laid it down again and again, for I have done the same thing myself. To *succeed* in any thing, there must be this thorough love for it. Your idea of water in the cellar, only indorses the idea of friend Simpson (see page 8, Jan. No., 1880.) Again, your ability to handle bees in the winter without injury (and I have no doubt but that it can be done), furnishes another link in the plan of raising bees under glass, to fill orders for bees by the pound, in April and May. I have already succeeded in raising bees in at atmosphere protected by glass from the winds and frosts; and if we can keep the bees in good health until they can be put permanently outside, the problem is solved. But, friend B., how do you know you won't lose all your bees in a heap next spring, as so many others have done, greatly to their astonishment?

MARKING THE WEIGHT OF PACKAGES BEFORE CRATING HONEY FOR MARKET.

A VERY IMPORTANT SUGGESTION.

WILL you permit us to make a suggestion that will greatly facilitate the honey trade? It is, to impress upon the fraternity the great importance of marking the weight of the empty packages, and particularly the shipping-crates, plainly upon the crates before filling. It is an easy matter to find what a full crate weighs, but then we have to guess at the tare, and the trade can not be satisfactorily settled until the crate is returned, thus greatly annoying dealers in not being able to make returns for the honey until the tare is decided upon. Besides this, there is almost always more or less loose honey sticking to the crate when returned empty, which adds to the original weight, and is a loss to the producer. May we suggest, that you and other manufacturers of crates weigh them when finished, and stamp the weight with a rubber stamp or stencil-plate upon the center of the top-bar, over the glass, that it may show readily when stacked up with glass side exposed to view. The crates would not vary much in weight; 3 or 4 different numbers would suffice for each size. We would not go into fractions of ounces, but mark them the next highest quarter, that they may be sure to be correct. Perhaps you would even say make it half instead of quarters. Any way to suit the brethren; but don't forget to mark the tare. A. C. KENDEL.

Cleveland, O., Aug. 11, 1881.

Why, friend K., you have struck upon a grand thought. I have got cross and scolded several times, just because the boys always would forget to weigh and mark the box before the honey was put in. It never dawned on my understanding before, that we could stamp every case before it could be used by anybody. We will set about it at once, and every time I look on a case I will remember to give you a mental vote of thanks for saving us all a lot of annoyance.

COMBS FILLED WITH CLOVER HONEY, INSTEAD OF COMBS FILLED WITH POLLEN.

IN regard to wintering, I will speak from experience and observation. I have kept bees 14 years, and have never seen bees die with dysentery, or, in fact, any other way universally, except after seasons of abundance of fruit and scarcity of honey in the fall. Now, then, we know that the combs are full of brood to the exclusion of honey and pollen, almost till fall; and if honey is scarce, more pollen will be stored. Have you never noticed the color of the fæces? I have often seen them drop it as clear as water; but when they had dysentery, it was always yellow. And did you ever know bees with dysentery when it was any other color than yellow? But I have seen it white when they had no dysentery, and were fed with flour. What does this argue? Now, from observation I have noticed that where bees were light in numbers in summer, that they would fill their hives with abundance of early-clover honey, even to the exclusion of half the brood; when fall came they would fill up the rest with honey very easily, without much pollen, even in a poor fall; and I have had the good fortune to see that these colonies were the ones that wintered best in nine cases in ten, even when exposed out of doors. Now, neighbor Fish has a bee-house. At this time of year he feeds back his extracted honey to get the bees to finish capping, as there is very little to gather here from July 20 to Aug. 15, on an average. Of course, this is supplying them with early honey to the condition of the light swarm spoken of, more or less, and he always winters successfully, while neighbor Newman, of Norwalk, does not do this as much, and has in his locality a poorer fall, generally, than we have, and his bees came very near having the dysentery last winter.

Here is the plan: Put 2 combs in with the sections, and as soon as capped, put in 2 more, taking out the first 2, and putting them away till you have enough clear clover honey for winter, and then as the pasturage becomes scarce, put one of these combs below, raising up a brood comb till the bees have naturally ceased brood-rearing; but do not crowd them to do so, and they can not get pollen into their winter's supplies. I am of the opinion, that the warmth of the repository giving the bees the preference of food is where the secret is with them, mainly.

G. H. MACKEY.

Milan, Erie Co., Ohio, Aug. 4, 1881.

QUESTIONS FROM A YOUNG BEE-KEEPER.

ONE WHO "WANTS TO KNOW, YOU KNOW."

AS I am a young reader of your journal, there are several questions I should like to ask, if they are proper.

How many pounds of bees should there be in a hive that is about two years old, or a young swarm just hived? I mean, the average number of bees in each box or hive, without honey-comb or box, or what tare is allowed per box.

Can't well be answered definitely. Anywhere from 3 to 10 lbs. The combs, honey, and pollen, may weigh anywhere from 1 lb. up.

How many days after a queen is hatched out before she is impregnated, and does the one act of fertilization with the drone do, if the queen should live five years, or is she a "Mormon"? If not, what is the use of keeping so many drones, if one answers for that purpose?

The queen is fertilized only once, and the large number of drones often kept in the hive are only nature's method of securing that once. They also make it more certain that any queen shall meet a drone from some other hive than her own. Queens are fertilized at from 6 to 10 days old, and begin to lay in two days more.

Do the bees sleep or rest on the bushes at night, or do they crowd into the hives these hot nights?

A single bee may occasionally stay out on the bushes over night, when the nights are very warm; but as a rule, every bee is at home before it is perfectly dark.

Can they see in their dark hive, or do they prefer light? How far do they go after food, or do they prefer having it at home?

Bees may see to some extent in the dark, but it is my impression that comb-building, nursing, and the rest of their work, is done principally by the sense of touch, with their antennæ. Queens lay their eggs by this means, as you will notice they always put their heads clear down into the cell before depositing an egg. Who ever heard of a queen tipping her head to one side, to squint down to the bottom of a cell, to see if it contained an egg? I think that bees very likely see the bees from a distance.—They often fly two miles or more; seem to work more profitably one mile or less.

If 50 hives were put into a room in the fall, with plenty of windows for light, and a stove to keep up the heat to about 40 or 50°, will they breed all winter? or how would you ventilate a cellar fastened up to keep out cold and frost, with 100 hives in it, supposing each hive had, say, 30,000 bees all in good order put away in the fall, kept there for 4 months, and how many bees would be in the same box when taken out, if they did not breed in that time?

I think it is said, the life of a worker is three months; should the same care be taken of bees that there is of cows and chickens?

By answering these questions you will confer a favor on a subscriber. WM. INGRAM.

Telford, Bucks Co., Pa., Aug. 6, 1881.

Your last question, friend I., has taken away my breath completely. Bees will fly on a window every time, as soon as the room is warm enough for them to fly. The life of a working bee, *during the working season*, is not as much as 40 days; but during the winter they may live a great deal longer than that. At some seasons the bees require fully as much care as cows and chickens; but there are several months during the fall, winter, and spring, when they are better off without care, if they have been properly cared for before starting into these cold months. For ventilation of cellars, see Geo. Grimm's articles on the subject. A hive of young bees may be kept four months almost without loss, if they raise no brood; but we do not often reach that perfection in wintering.

IMPORTANCE OF GETTING THE BEES ALL FIXED FOR WINTER BEFORE FROSTY WEATHER.

ALSO SOMETHING ABOUT GETTING OUT OF BLASTED HOPES INTO THE SMILERY.

I HAVE just received the Aug. No. of GLEANINGS, and was so struck with the truth of a statement made by W. D. Hinds, of Townsend, Mass., on page 385, that I could not resist the temptation to confirm the statement, and also contribute what little information I may have from this section of Iowa.

Bees were almost universally handled too late last fall. People had no idea winter would commence for a reality, in its severest form, the middle of October. It was unlooked for,—an unusual occurrence, as our falls are, with very few exceptions, simply beautiful, mild, pleasant weather, until Christmas; have considerable wind, and but little snow. People here are unaccustomed to sleighing, consequently they have no sleds; but during the winter, every man, woman, or child, who could afford a horse, and a dry-goods box, had a sled, and it was certainly comical in the extreme to see so many different ideas. But this is not bees.

Last fall I went into winter-quarters with 78 stocks—Italians, but not pure. I use the Champion hive, frames 10x12, and 10 frames in hive. I gave them all on an average 50 lbs. of good new honey, basswood and goldenrod, covered tops of frames with two thicknesses of common cotton or domestic. I drove two rows of stakes three feet apart, then spread straw between, about six inches deep, then covered that with boards, nice, even, and level; then set in my hives in a row, with their fronts alternate, placing the hives about 3 inches apart, then protected my entrances in order to keep out chaff, and give bees an opportunity to fly when they chose to. My next move was to place a board to the front and to the back of bees, leaning against inside of post. Now I commence to pack chaff all around, leave off my covers, add more 6-inch boards until they are four high, then top off with coarse hay. Thus you see they have one foot of chaff in front and behind, with 3 inches between.

You would almost venture to say they were free from the sudden changes of even an unusually cold winter; but such is not the case: my entire stock all died but nine.

But now comes my confession. Just before I packed away, I transferred 19 in cold weather, so cold that mittens were comfortable. I gave them their winter supplies in somewhat cool weather, and, last of all, had to pack them away in just such weather. Kept waiting for our nice warm days to come, such as we usually have; but, alas! they never came, and I was forced to put them away just then, or leave them out, which I thought would be sure death. Hundreds of my combs were handled, jarring and breaking their cosy little homes for winter, but no opportunity came to repair the damage done. Cold winds and drafts penetrated, snow drifted in, ice formed all over the combs, and the moment a bee left the cluster, it had to crawl to a frozen, icy comb, there only to meet its doom. The combs were too close, not allowing enough bees to cluster together to keep up the necessary amount of heat. No holes were cut in order to give bees a free passage to and from any comb. As it was, the space between combs soon became clogged with dead bees, and they died so rapidly that, in their effort to remove them, they only clogged the entrance tighter and tighter (entrance about 3x⅜ in.) The once prosperous swarm soon dwindled down to nothing. The heat became less, and a mighty effort was necessary to keep body and soul together; but it was too much for the little fellows, so they buried their heads in the cells, and gave up the ghost. Not one mouthful of honey could they get, but just in the next comb there was an abundance. I had many stocks come out in just such shape, but some others starved outright, and put away with 50 lbs.

Had they been put away at an earlier season, and allowed time to seal up with propolis, good and tight, then removed gently to their winter location, I feel confident they would have come out unscathed.

I will give you my reasons for thinking so.

My partner (*then*) wintered his 65 stocks within 40 feet of mine, in just the same manner of packing. His loss was about 18 or 20, but he packed them before mine a week or ten days, and had no jarring to do,—simply to set his hives into ricks, and quietly cover them up.

We have wintered in this manner for ten years, and have *always* been successful. It's my opinion the majority of bee-keepers were a little careless last fall in attending to their apiaries, and preparing for winter; but they are somewhat justified, on account of the extremely cold weather which set in so soon, taking every one by surprise, compelling farmers to leave broad fields of yellow corn, to the mercy of hungry, roving cattle. But in another sense of the word, we are responsible for the loss of almost every bee. I have reference to men who follow apiculture as a profession. There is a shadow of an excuse for men who are engaged in some other occupation, not depending on bees for their bread and butter exclusively, but who keep them for fun, I guess. Whatever we do, if we intend to make it our business, let us do it; don't leave one stone unturned; devote every spare moment to improvements; do whatever lies in your power to advance your loved profession. Don't let any thing wait until to-morrow; go at it with a determination to make it win, come what will; and above all things, have faith, and don't give up. Hang on to the last, and if you get on your back, lie there and kick. I feel so glad over my victory this spring, that I can not help speaking as I do.

Nine poor weak stocks, and I badly in debt! Nine weak stocks! could it be possible? could I ever face my creditors, and feel that, when the time came around, I could pay them? I was on the point of giving up, when a little advice given by a friend turned the balance. I went to work with a will, cleaned out my hives and combs, transferred my dirty, sticky little fellows into a clean hive, contracted the space in hive and fed them. I soon discovered pollen coming in from soft maple, and from that time it has been a continuous boom. Not one bit of robbing; all is well, and "the goose hangs high." I soon started nuclei, raised my queens, bought about 18 stocks, and now I have 70 rousing stands, ready for our fall crop of goldenrod, which is what we depend on almost entirely; no clover, and no fruit-blossoms. Basswood, goldenrod, buck brush, tanweed, sumac, and sunflowers, are our honey-plants. I have now a surplus of about 1000 lbs. of honey, and my 70 stocks. If we have an average crop of goldenrod we will gather 6000 lbs. easily. I raise none but extracted honey, as I can make it pay much better.

When I think how blue every thing looked in spring and now go out and see my yard full of lively little fellows, each bringing in his sweetened burden, working all day long so unselfishly for me, my heart goes out in tender gratefulness to Him who is the giver of every good and perfect gift. I am truly grateful for all I have received.

ED. F. CHRISTIE.

Maple Landing, Monona Co., Iowa, Aug. 8, 1881.

IT seems to me a little unkind for the *A. B. J.* folks, *any of them*, to intimate that our apiary, of which they gave a fine picture a short time ago, was more a picture than a reality. Four of the seven apiaries are filled completely, and two of the remaining three are partly full. One man has entire charge of it now, and if there is an apiary worked more successfully for raising bees and queens on the face of the earth, I should like to pay it a visit. Come and see the bees and queens, and get some grapes, friends, and then you won't think it is *all* on paper.

GRAPE SUGAR NOT ALWAYS "DEADLY" FOR BEES.

ALSO SOME IDEAS ABOUT VENTILATION.

THE writer of the following, while making us a visit, remarked that he wintered 49 out of 50 colonies last winter, and that they were all fed on grape sugar except one, and that one died. I asked him to give it me for print, and here it is:—

FRIEND NOVICE:—We comply with your request, while visiting you lately (at the "Home of the Honey-Bees"), to tell you all about how we fed grape sugar to about 50 colonies of bees last winter, with loss of but *one*. Well, the facts are these: After the burning of our farm house, June 8, 1880, we found our apiary, which was located near the house, reduced by the heat about one-half. In September we procured a lot of grape sugar, and fed about 50 stocks. We fed *only* when the weather would permit the bees to fly *freely*. Part of our frames are Gallup and American, but mostly L. The two former are closed-top. We put the chaff cushions right on top the frames, and wintered on summer stands. The apiary was located on low ground that was subject to overflow. The hives were put down on about one foot of sawdust, and were in no manner disturbed till March, when the weather opened up some, and the bees took a good fly. At that time we again "poked in" that "irrepressible" grape sugar. The colony that "petered out" was in a box hive, 21x12 inches; had plenty of thick pure honey and pollen, and *no* grape sugar; hole in top of hive, 4x4 inches. The loss of that colony, we charge to excess of "ventilation;" and right here I would caution you to be careful how you "go off" on "ventilation," for we once lost the best colony of bees we ever had by allowing the slide to remain *out* of an opening 4x4 in. *under* the brood chamber. That *neglect* killed that powerful 12 L. frame colony by Christmas. We don't have any cold currents of air up through the cluster *after* we go into winter-quarters, and not, on an average, half as much in the summer as some bee-keepers we could name. We believe that all fresh air necessary for any colony of bees in winter can be got *into* the hive at a 2x⅜ inch entrance, and *out* of it through a good thick chaff cushion, placed right on top of the frames—*without* any "round" or "square" hole in its center.

As to your query, how our bees were prospering, etc., I will say we about doubled our stocks by divisions and natural swarming. We have the strongest colonies, and healthiest-looking bees we ever had.

Our crop of extracted and comb honey will foot up well, as at this date our red-clover bees are bringing in considerable surplus of finest quality, from the after or second crop of red clover.

In concluding this hastily written article, I will add that, for a radius of 4 miles from our apiary, there is not one living colony of bees that came through last winter. Wouldn't this be a splendid place, friend Harrington, for those shy Holy-Land virgins, that want to extend their wedding tours? Next month all of our colonies that may be found in need of winter stores shall have plenty of good pure grape sugar, while the weather is yet warm enough for them to exercise well in the open air.

We feed it in the solid state over the frames, and in body of hive; sometimes moisten it a little. Further inquiries will be cheerfully answered. Some time we hope to be able to tell all about what we learned during our visit to the "Home of the Honey-Bees." I return thanks for favors received.

Smithfield, O., Aug. 15, 1881. D. H. TWEEDY.

I have published the above to show that grape sugar is not necessarily the cause of bees dying, even if those fed on it die, and no others. A few months ago a friend wrote that the queens we sold him last year were certainly poor, for every colony where he introduced them died, but none of his others. Was it the queens that killed them? To be sure, not. It was the disturbing and stirring up the colonies at a particular time in the fall, in my opinion. We have often had reports of colonies that died after being moved in the fall, while the rest of the apiary that was not all so moved, all lived. Again, the moving seems to make no difference. Friend T. thinks too much ventilation killed them. In view of what has been said about leaving sections over the hives all winter, I can hardly think this is so. Whatever may be the truth in regard to so many conflicting reports, I think it stands out strong and clear, that it is best to fix our bees all up before cold weather sets in, and then let them alone until it is warm again. I think it is also well decided that coffee or granulated sugar is much safer than grape sugar, honey, or any thing else, providing you *must* feed to give them the requisite stores.

Juvenile Department.

LAST fall my brother had 19 swarms; some of them were Italians, and some blacks. There were 5 swarms which came and stopped in the trees near the bee-yard. We put them into hives, and gave them a place in the bee-yard. Through last winter we lost all but 4. My brother has been in poor health for 2 years, so he has taken a trip to Lake Superior, and I take care of the bees. We take GLEANINGS. Mother and father like to read the Home Papers, and I like to read it, and look at the pictures of Mr. Merrybanks. I will be 12 years of age the 23d of December. Our bees are doing well.

WILLIE A. YOUNG.

La Salle, La Salle Co., Ill., July 18, 1881.

I am a little girl 10 years old. My pa keeps bees. This is the first letter I ever wrote. I like the bees pretty well when they don't sting. I go to Sunday-school. I get a little paper every Sunday. I like to go pretty well. My teacher's name is Alice Crady.

ELIZABETH LEEPER.

Dysart, Tama Co., Iowa, July 10, 1881.

Pretty well, Lizzie. Give my respects to your teacher, and tell her I am glad she has got a little girl in her class who can write letters for print when she is only ten years old.

I am a little girl ten years old. We live on a farm in the country, seven miles from town. I don't get to go to Sunday-school, but I would like to. We live too far from any. Pa has had bees several years, but we never get much honey. Last year pa sent and got one of your books, and made some hives according to your directions, and transferred the bees to them but they all died last winter but two. Pa says he is not going to give it up yet. You won't have to give pa a smoker to quit using tobacco. He don't use it, nor whisky either. I like to read the letters in GLEANINGS the little girls write, and Mr. Merrybanks' bee-pail. LORETTA UTLEY.

Farmersville, Posey Co., Ind.

May God bless both you and your papa, Loretta! I am very glad he doesn't smoke, nor drink whisky. How many little girls who read this can say as much? But I want you to go to Sunday-school; and will you please tell your papa that he must take you and go too. If there is not one near enough, tell him to stir the people up and start one. Will you tell him so, Loretta? What makes them call your county "Posey"? Is it because you have so many posies? If so, I should like to go and see you.

Although but 12 years old, I take an interest in reading your journal, particularly the Juvenile Department. I have two brothers who keep bees. They began last year with one colony, which came through winter all right; they packed it with chaff in a box, which was 6 inches larger each way than the hive. They connected a ventilator with the entrance, then covered the box with straw. The bees were 150 days without flight. The winter was very cold; sometimes 30° below zero. My brothers take GLEANINGS, and by the way they read it I should judge they thought some thing of it at least.

By the way, I must tell you my experiment with the big bee—not Mr. Benton's bambera, but the bumble-bee. I made a small hive for practice, size 6 by 4 inches, and 6 inches high. One day I found a bee's-nest, and after putting on veil and gloves I transferred them into my hive, and removed them to a new stand. Afterward I found two more nests and gave them the honey and brood. What do you think of that, Mr. Root?

I attend school, which my sister teaches. There are a number of bee-men in our vicinity. I live but a few miles from the noted bee-keeper L. C. Root. I send you 12 cents for which please send me a pocket letter-balance. GEORGIE W. JONES.

Frankfort, N. Y., August 8, 1881.

I suppose, Georgie, that those bees packed in chaff wintered all right, although you do not say so. I, too, once had a pet hive with bumble-bees in it, but all the profit I got from them was to see visitors run whenever I opened that hive. I really wish you would pay friend Root a visit, and tell us some thing about what you saw there. If you will make such a visit, and write us a letter about it, I will pay you one dollar for it.

I am a little boy 11 years old. My papa keeps bees, and has begun this year to take GLEANINGS. He has kept bees for several years, but he has not been at home much till this summer, and could not take care of them. He is now at home much of the time, and so can look after his bees now. He used to keep 20 or more stocks. He has only 7 now. They are in Langstroth and American hives. He likes the Langstroth better; he says he shall use the Simplicity next year. I am not afraid of bees now, but used to be. When bees light on me now I stand still, and they fly away and don't sting me. My papa showed me a queen-cell to-day in a swarm that was hived June 6th. A swarm came out Sunday, June 12th, and alighted on the body of a maple-tree below the limbs. I helped hive it, and did not get stung. Papa could not get the bees to go up into the hiving-box, and at last he took a half-bushel basket and brushed the bees off into it, and they filled the basket almost full.

I have read GLEANINGS, and see that you like to have boys and girls write to you, so thought I would write you a letter. I like to read about Mr. Merrybanks, the Juvenile Department, and cartoons. I go to school, but we have vacation now. I have been promoted to the grammar department.

WILLIE H. POND.

Foxboro, Norfolk Co., Mass., July 25, 1881.

I am a little girl 11 years old. I saw so many letters in GLEANINGS, which my father takes, that I thought that I would try it. This is the first time I ever wrote. My pa has 12 colonies of bees. I like to help when they swarm. I am not a bit afraid of them. I have not got one sting this summer. I have 5 brothers and 3 sisters. LIZZIE JOHNSTON.

Danforth, Iroquois Co., Ill., July 12, 1881.

Perhaps the reason why you are not afraid, friend Lizzie, is because you have not been stung; are you sure you will be as brave when you *do* get stung? Why, there are almost enough of you to have a Sunday-school there at home, without anybody else. May God bless you, and all those brothers and sisters!

In my last letter I made a mistake. I said I was 11 years old. Pa says I am only 10. Pa bought the watch for me because I had epilepsy. He told me I must not run and get excited, and that I should take my medicine regularly so I can get cured. I don't have any spells if I do, but sometimes I forget myself, and run too much in playing and don't take my medicine, and then I get a little spell.

Pa had 9 swarms last fall, and he wintered 6 of them. Now they have increased to 17, and he says we will soon get lots of honey; yet he says if I am well he will give me one swarm. I like to go to Sunday-school every Sunday, and I don't forget to take my watch along either. CHARLES PETERS.

Rogersville, Tusc. Co., O., July 18, 1881.

May God grant, friend Charlie, that you may become perfectly cured of that dreadful malady. Last summer a little girl was taken with a spell of it, right in Sunday-school. Tell your pa to look out for next winter with those 17 swarms.

THE LANGSTROTH FRAME.

FRIEND ROOT:—On page 363, August No. of 1880 of GLEANINGS, in an article headed "Which Frame is the Best?" and signed Chas. Dadant & Son, I find these words: "You know, as well as we do, that the Langstroth frame is not fit for outdoor wintering." Now, is the above remark true? It is, of course, intended as an effort to disparage the Simplicity hive, and may have some weight with those who know nothing of the practical working of the so-called "Langstroth Standard Frame." So far as I know, everybody admits that the L. frame is the most convenient form and shape for easy operation; and if the only objection found to it is its wintering qualities — out of doors — and it can be shown that that objection is incorrect, then why do we not have in the L. frame the best possible form that can be devised or used?

Let me give a bit of my own personal experience. In the year 1871, I put a new swarm of bees into a Standard L. hive, with the simple triangular guides on which to start the comb. In the fall of that year this hive was prepared for winter, by cutting winter passages through the combs, putting on a honey-board with six 1¾-inch holes through it over the frames, with wire cloth over these holes, and 4 or 5 thicknesses of old carpet over that, then putting on the cap and contracting the entrance blocks to about 1 inch. From that time until the fall of 1880, nothing was done to this hive, except to take off the wire cloth and put on surplus boxes, and in the fall of 1880 the surplus boxes even were not taken off, nor entrance contracted. This last spring I opened this hive for the first time in 10 years, and found the comb dry and in good shape—this same hive having given out a swarm every year, and yielded from 20 to 30 lbs. of surplus honey per year. Now, it strikes me that a hive made of ⅞-inch lumber, that will go through the seasons that the above hive has, and come out in good shape, *is fit* for out-door wintering, and I must be excused for not accepting the say-so to the contrary of Chas. Dadant & Son.

In the same article they say further: "The question is not, 'Is the Langstroth frame good?' but, 'Is it the best?'" Now, in answer to that, I will say that I have kept bees more or less for fifteen years, using both deep and shallow frames, and as far as my experience goes, the L. frame is the best, and for the reason, that it is the most convenient form to handle, and its wintering qualities, as shown in this article, speak for themselves.

Foxboro, Mass., Aug. 10, '81. J. E. POND, JR.

CANDY FOR QUEEN-CAGES.

I SENT you two hybrid queens Saturday, and suppose you have them now. I sent them, not because you wanted them, but for the following reason: Those cages were made 13 or 14 months ago, and provided with candy made by dampening coffee A sugar with a little cold water, and put into the cages to harden. I studied up that tin bottle, and, as you see, it serves the purpose of a water-bottle, and also closes the hole and can be taken out and refilled. I notice of late much said about candy to supply queen-cages. I wondered at this, because I had an idea that on candy, made of pure standard A sugar and water (I never boil or heat it) there could be no improvement made. All the queens I sold this season were put up in such cages as I sent you, candy over a year old, and the tin bottle filled with water. Up to this writing, not a single one has been reported dead. Now, if those I sent you came through alive, there would not be a single loss. I shipped them on Saturday, so they would lay over Sunday. I did not send these queens to sell them for money; I only wanted to show that new fresh candy is not an absolute necessity. Old cages need not be refilled if the old candy be pure. In regard to honey, I would say, it is the worst food that ever came under my observation in queen-cages, because all the queens and bees I received, soiled the cage and themselves when provided with it. If there is any thing in the simple way of providing bees with water in my cages, I shall be much pleased to have you make use of it. I told you of them a year ago, but thought it not worth the trouble to send you a sample while there were so many excellent cages in use. R. STEHLE.

Marietta, Ohio, Aug. 8, 1881.

It does seem to me, friend S., since you speak of it, that somebody has mentioned making candy of nothing but sugar and water, without boiling. The candy in the cages you send us is almost as hard as flint. I could not cut or pry a piece out with my knife, just to taste it. As you say, the cage could surely be used just as long as there was any candy left, by simply replenishing the bottle with water. I will explain to the friends, that this cage is simply a block of wood 2½x3 inches, and 1½ inches thick. A 2-in. hole is bored nearly through, and covered with wire cloth as usual. In one side is the hole to put the bees in, 11-16 in. in diameter, and to be closed by the water-bottle. This water-bottle is simply a tin tube the size of the hole, and 1¼ in. long. One end is closed by a round cap, 1½ in. in diameter. The other end is simply corked up, with the usual notch in the cork. The large cap makes it easy to pull the water-bottle out, and it can't slip in too far. If it were not for the feature of the Peet cage for getting the bees on the comb, I really believe I would adopt this. Where we use water-bottles, we can, of course, adopt this candy; and, by the way, what a very cheap way this is for making candy to feed bees! Just wet up sugar and water, and pour it into a frame, tray, box, or whatever else you choose, and set it away to dry, and you have the nicest and purest candy that can be made, at an expense for making—whew! I wonder if there is anybody present who remembers what was written in the first volume and first No. of GLEANINGS in 1873. See:—

> PROBLEMS FOR THE GENIUS OF OUR YANKEE BEE-KEEPERS.
>
> 1. Some plan by which coffee sugar can be made into solid candy, as cheaply as we can make it into syrup; so that we can have it in cakes or bars to be laid on top of the frames under the quilt. The most careless bee-keeper could then supply destitute colonies with a more wholesome food than honey, and see when they were out by simply raising the quilt. Perhaps our Southern friends could make us some such sugar. If dampened up with water, and dried, the "little chaps lug it off" out of the hive, when it crumbles down, one grain at a time.

Now, the sugar in the cages of friend Stehle will not crumble down, I can tell you. Do you see how near I was to the discovery eight years ago? Will friend Stehle tell us just how he wet up the sugar? Was it stirred any length of time? Can not blocks of it be made in a paper box? It don't seem to me anybody need to buy candy any more.

DARK-BANDED ITALIANS.

SOME bees are sent us, said to be from an imported queen bought of Dadant, with the darkest leather-colored bands of any I have seen. Almost any one would pronounce them black bees, by the looks; but when filled with honey, and placed on the window, they are plainly Italians. I presume that, in working qualities and gentleness, they will be like any imported stock, and are likely just as good for all practical purposes. I would not be surprised if the second generation were just as yellow as any Italians.

CALIFORNIA.

OUR OLD FRIEND GALLUP ALMOST IN BLASTED HOPES.

EDITOR GLEANINGS:—I shall give your readers an insight into the trials and tribulations of California bee-keeping for the season of 1881; and to begin, I will give my memorandum just as I find it in my pocket diary.

I started the season with 103 stocks; 3 of them were queenless, and one drone-layer. On the 31st of March I had 54 new swarms; swarming was all done up on the 19th of April, and I had 112 new swarms, part artificial but mostly natural; yet I suppressed swarming as much as possible. But swarm they would, and swarm they did. April 17th and 18th, quite heavy rain. April was extra cool and foggy up to the 24th; young swarms all had to be fed, and supplied with fdn., as they could build no comb. They began to gather honey quite freely on the 28th of April; began to extract from brood-chamber to give room for the queens to lay. May came in quite cool and foggy. Buck brush, button, and white sage in bloom; 6th and 7th, quite good honey weather; 9th to 12th, very cool; slight frost in some places; 14th, weather some better; 16th, light showers, accompanied with some thunder on the mountains; May 19th, excellent honey weather; 20th, hot and windy; too much so for honey; 28th, excellent honey day; 29th, too windy again; June 25th, finished up for the season; had 3000 lbs. extracted honey; could scarcely succeed in getting young queens fertilized. My final increase amounted to about 50 per cent. When they failed the second time, I commenced breaking up and doubling. The coast breeze would come up every day about 10 o'clock A. M., and blow until 3 and 4 P. M., a perfect gale. Young queens would fly out and never return, and the workers were swept away by the thousands. I attribute the swarming mania to the stock from my imported queens, as my bees and Mr. Dudley's, who had the use of my imported queens, were the only ones that swarmed to amount to any thing in the whole country, so far as I heard. Many apiaries did not have a single swarm. I never saw a more profuse bloom anywhere in my life. Some apiaries have done better in surplus than I have done, and some have neither swarms nor surplus. A great deal has depended upon locality. Some apiaries were located where the range was protected from the coast winds.

My plan to get surplus is this: I never put on a super until every one of the 10 combs is full of brood, and my fdn. combs are full indeed. They would average 6000 bees to the comb, and many of them 6800, and as straight and true as a board. I do not always wait for the queen to fill every comb in that manner, but I want to know that I have a good prolific queen, and then exchange or draw combs from other stocks, and fill up, and then on goes the super. Now, a stock prepared in that manner will store honey if there is any to be had; and if I had 200 stocks of bees, and could get only 100 in the right condition for supers, I think I get more honey than I would to put supers on the whole 200 hap hazard. Of course, those that I draw brood from I build up to good strong stocks for wintering. I left the bees in good condition, and I may say splendid condition, but have not heard from them lately.

The season has been a very deceptive one. There was abundance of rain, and abundance of bloom and bees; bee-keepers bought lumber, made hives, and made or purchased cans, and then waited for swarms and honey that did not come, and there is a blue set of bee-keepers in Southern California to-day. I have come out with more than a whole skin. When my bees were swarming I was accused of feeding to stimulate; but I did not feed a single old stock in the apiary, for all had an abundance, and the most of them had more than was necessary, and I took honey from them to feed my new swarms. I had about 1000 frames filled with new comb, mostly from fdn. Here in Los Angeles Co., bees have not done as well as they did in Ventura Co.; some have moved their bees down into the valley to prevent starvation; still, those that kept them in the mountains have filled up well from California sumach.

ELISHA GALLUP.

Santa Ana, Los Angeles Co., Cal., July 19, 1881.

ITALIANS WORKING ON RED CLOVER.

I WAS reading in your May No., 1881, about red-clover bees. I would like to inquire what variety of bees these are. I supposed the Italians would do that, but I have them, and I have never yet seen a honey-bee of any kind on red clover. I went out to-day into a field close by that was in full bloom, second crop; it was swarming with bumble-bees, but "nary" a honey-bee. I have 9 swarms of bees, mostly Italians, and only one among the lot that has stored any surplus comb honey. I came home disgusted with my bees. The only thing they are doing at present is gathering a little pollen from corn-tassels. Put me in Blasted Hopes, for I guess that is where I belong. There was lots of white clover here this season, but the bees could do nothing but swarm during its stay. If you have got a strain of bees that you can guarantee to work on red clover, I would like to try them. I have one swarm of hybrids in chaff hive that I will put the red-clover queen into for a trial if you can supply me.

L. G. REED.

Kent, O., July 31, 1881.

What we termed our "red-clover queen" was the queen of a single colony out of over 300, that gathered more stores than any of the rest when the seed crop of red clover was in bloom, and we supposed the honey came from red clover because the working bees all had a small load of the dark-green pollen that comes from red clover, and seldom from any other plant. The queen died last winter, but we have several of her granddaughters in our apiary. Sometimes red clover yields honey in the fall, and sometimes it does not; so you must not blame your bees if you do not always find them on it. In our locality we can almost always find Italians at work on clover-fields in August, and I have shown them to a great many who were skeptical. If you have only a few hives, and there are large fields of clover, the bees would be so scattered that you might not see them; but go to your hives and see if you do not find laden bees coming in with the dark pollen on their legs, as I have mentioned. About one season in four, our bees gather honey enough from red clover to build some combs. At such times common bees will do little but rob and bother, while the Italians are diligently at work. I can not give you a strain of bees that I will *warrant* to work on red clover in the fall, friend R., nor do I think anybody else can furnish you bees that will do it invariably. Last fall I saw a field in Summit Co. where the Italians roared on it in August as they do on white clover in June.

ADDING EXTRA COMBS IN BUILDING UP STOCKS.

SINCE I have been a reader of GLEANINGS I have been looking for some thing from some of the veterans in regard to the manner of adding combs for surplus, but I have found nothing more explicit in all my reading of bee literature than "give more room as it is needed." Doolittle did an excellent service for the A B C class when he told us in such a clear and explicit style his method of building up colonies in the spring (see April No.) If he would tell us in the same explicit manner how he adds surplus combs he would still further merit our thanks.

In the hope of calling out some thing on this subject, I will give the method which I have followed the present season. If it is faulty, will you or some other veteran please tell me wherein it is so, and explain in detail a better way?

I build up my colonies according to Doolittle's plan till I have the lower story full of frames which are crowded with brood and honey. Then, if the bees are gathering honey freely, I take out three or four frames which contain honey and sealed brood and place them in an upper story, putting a couple of frames of fdn. in the middle of the lower story with a division-board at the side. I put a division-board in the upper story so that it may come directly over the one in the lower story, and fill up the vacant space with empty combs. As the queen needs more room below, I add frames of fdn.; and as more storing room is needed above, I add empty combs.

BEES EATING HOLES IN DUCK.

Can you tell me how to prevent the bees from eating holes in the duck of chaff division-boards? Would painting the cloth, or coating it with tallow, work well? JAMES MCNIELL.

Hudson, N. Y., Aug. 1, 1881.

I confess, friend M., that I should never have thought of giving directions for so simple a matter as giving the bees more room as they need it, when one is so fortunate as to have the empty combs right at hand. I think I should wait until the bees and queen have occupied fully every comb with eggs and stores, and then I would give them one comb right in the center of the brood-nest. If I intended to use the extractor, I would wait until they are pretty closely crowded below, and then give them access to the whole upper story, if I had empty combs to fill it. If not, I think I would move a couple of combs up from below, putting sheets of fdn. in their stead, and then fill the rest of the upper story with fdn. If I am correct, Doolittle does not use an upper story with his shape of frames.—I do not think you will find any thing that will keep the bees from gnawing the sheets placed over them. Ducking, pretty well saturated with linseed oil, has been recommended, and very likely the oil might have the effect to make them let the fabric alone. The wooden mats have the durability wanted, but they are not as nice as cloth to handle, and are more apt to kill bees unless one is very careful.

BEE-CAVES IN TEXAS.

FROM a recent number of the *The Youth's Companion* I copy the following:

"Four of us, my ranch partner Alfred Dinsmore, and myself, with a young German house-carpenter named Wert Anspach, and a colored boy called Grant, had set out that day for a load of honey.

"A load of honey will sound oddly, perhaps, to readers East, but that is the way we get it here. Wild honey, rich stores of it, is laid up by the native bees. The settlers often have resort to a bee-tree when their stock of sugar and molasses runs low. The honey is drained from the comb, and put away in jars; and the wax makes excellent candles.

"Twelve or thirteen miles north of our location, in the canon of Lipan Creek (headquarters of Wichita River), there is a bees'-nest, which has supplied us and the families of three other stockmen for the last four years.

"This enormous bee-hive is in the cliff on the north side of the canon, fronting south. The entrance to it is up some forty feet above the creek-bed, where there is a horizontal crack eight or ten inches wide, running along the face of the precipice for four or five hundred feet. This crack opens back into recesses in the shattered crags behind; and here the bees, colony on colony, have their nests, and have laid up honey for many years. By going around and operating from the top of the cliff, we have at odd times dislodged considerable portions of the rock with blasts of gunpowder and crowbars—sufficient to secure many hogsheads of comb. Still deeper down, in great holes and pits, there seem to be vast deposits of old, thick, black candied honey, which has been drained from the combs above, year after year. Lower down the face of the cliff, especially on very hot days, the honey weeps and oozes out at little cracks and seams of the fissured sandstone—so much so that the creek-bank is there completely honey-soaked, and the water for a mile or two below will at times be perceptibly sweetened. Much of this escaping honey the bees themselves carry up the cliff.

"On a pleasant June day, in the canon and high above it, the air will be darkened by the incoming and outgoing bees, millions on millions of them, along the whole length of the crevice. The ordinary drowsy hum of a hive is here intensified to a deep, solemn roar, distinctly audible a mile below.

"To go honey-gathering here on a summer day might be a perilous business. We have always made our raids on the nest during cold weather, generally on some chilly day toward Christmas, when the bees are lying torpid, and a winter silence has fallen upon this whole vast apiary."

The writer then goes on to tell how a "norther" came down on them, before they had quite reached the bee-cave, and they were obliged to seek the shelter of a friendly cliff, where they built a fire which drove some bears from their den among the rocks. They were fortunate enough to kill the bears, which were very fat; and the writer remarks, that "their flesh had a noticeably *sweet* taste, which we attributed to their getting so much honey hereabouts."

I have written to the publishers of the *Companion*, asking them for the writer's address; and if I can learn any further particulars I will send them to you.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

The above reads very much with an air of truth; but so large a part of what we find in papers of the above class is rather on the adventure line, I would be a little cautious about accepting it; and if any of our Texas correspondents can tell us whether such a place really exists there or anywhere on the face of the earth, we will be ever so much obliged. We have more than one among our number, I opine, who would go down and develop such a tract at once. So far as I can see, there is nothing impossible in the statement, unless it be hearing the bees a mile away; and even this is quite likely, if the line of flight were right from the cave over the hearer's head.

A LETTER FROM SOUTH AMERICA.

ALSO GOOD NEWS FROM THE STINGLESS BEES; FURTHER DEVELOPMENTS.

IN hopes that you may have received my last letter, inclosing a correspondence in German with Prof. Dr. Burmeister, I must tell you to-day that I got letters from Paraguay, and they offered me on sale several hives with stingless bees. What they call a hive is, I suppose, a piece of box, or trunk. My friend in Paraguay has been in Brazil, and writes me in regard to the stingless bees as follows:—

"The bees I could get for you are the following: 1. *Pirocco* or (*eirocco*), a black bee as big as our common bees; gives plenty of honey (on Brazilian *Kurupu.*)

"2. *Tapecoa*, or *Tapocoa* (Brazilian, Kurupu chico), half as big as No. 1, but gives same quantities of honey.

"3. *Tatei*, a very small but rather long yellow bee. These hives are well peopled. I have seen hives of these bees, which gave 3 bottles of honey. This honey is the best of all, clear like crystal.

"I found three hives, whose owner has, for 3 or 4 years, made his profit from them. He asks $3.00 for each, but I believe that, by taking all three, I might get them a little cheaper."

That is what my friend writes me, and I am sure he will do his best to procure them well at Asuncion, where they might be shipped to here.

Let me know, Mr. Root, if you think it worth the trouble, the expenses, and the risk, to send these bees to the United States. The best thing would be, I think, to buy them, and transfer them here in Buenos Ayres in good (movable) small hives, and study them about a year before sending to New York.

Can I do some thing for you in this business? I shall do it with the greatest pleasure; only let me know. Yes, I am very willing to do it, as I feel, by your way of acting and writing, that you are an honest and at the same time an active and smart business man. I read your GLEANINGS with the greatest interest, and would like it ten times more if they did not contain those confounded Home Papers, and now lately the Tobacco Column. By what right and reason, please tell me, are you going to make people believe tobacco-smoking is a sin? The same sin would be coffee and tea drinking. Our clergymen and schoolmasters at home in Germany smoke nearly all like pipe-stoves, and you find really splendid men among them, able to spend their last drop of blood to help their neighbor; and a good fine Havana cigar is indeed a blessed gift of God. Try it only; and for a poor workman, what a delight it is to him to smoke his pipe after his heavy journey's work! I think it rather heartless to make these people believe they are doing wrong in smoking. If I should live among people who vowed not to smoke, not to dance, and not to drink, I should prefer to die. My advice is, to enjoy this life as much as we can in an honest and proper way. A man who does not know how to govern himself and to be master of his passions is to me less than an animal.

On the next page you will find my orders, and I ask you to send me the things as soon as possible.

The cold-blast smoker is very good. The Bingham smoker (I got one from Mr. Gravenhorst, Germany), burns the fuel better, but brings ashes and dirt on the combs. With the best and driest fuel I took, I could never make the cold-blast smoker burn it to the last. It burns in the front part, but not behind. I had to open the machine and turn the fuel around. Could not a small "rust" be put under the fireplace? Of all I ask for, send me only the best quality.

Don't you know a good recipe to make honey-wine and good vinegar? Our bees here are real devils in summer time, and if I could get a bee somewhat less wild I should be glad. I don't fear stings, but in the month of December or January it is impossible to work without gloves.

Do you think it possible an Italian queen would reach Buenos Ayres alive? If you do, send me one at my expense, but give her sufficient bees and sugar and water. Look out for a soft and good-natured one.

I leave it to you to choose me a good and simple hive.

In thanking you previously for all your trouble, I give you my best respects.

Yours truly, J. NOELTING.

Buenos Ayres, S. A., May 18, 1881.

Friend N., I am very much obliged for what you have done, and I will gladly pay all the expense of giving those bees a test where you are. I think that will be far the better way. From what you say of the bees you have already, I presume you know all about stings. The point is, as you are well aware, to get a good honey-bee that can't sting. Of course, we do not know whether it be possible; but we are anxious to know how nearly we may come to it. Advise me at any time in regard to the expense, and I will remit at once.

I appreciate your kindness in speaking out your criticisms in regard to those Home Papers. May I suggest, that you look at these things a little differently from what we do, as customs with you are so widely different? I have been told by a friend who has been in South America, that drunkenness with you is almost unknown. With us it is different. We have a large,—yes, I am sorry to say a *very* large per cent of our people,—who have not the self-will or care for themselves to keep them from going to excesses. You say you would rather die than forego the pleasures of certain things you mention. Do you not see that an intemperate man might easily say, by carrying your figure only a little further, that he would prefer a drunkard's grave to being deprived of his daily drinks that are sending him there? As a servant of the Lord Jesus Christ, I feel myself commissioned to try to save all mankind from the consequences of their sins. Now, when I give a man a smoker for giving up tobacco, it is expressly understood that he can dissolve the contract at any time by simply handing over to me the price of the smoker. Do you think a man is under very much bondage, or that I am very cruel, when the price of his freedom and honorable discharge is only a dollar or less? Tobacco soothes a man's spirits and trials, it is true; and I have sometimes thought it might soothe him into idleness when his honest debts were remaining unpaid. If tobacco has this effect, would he not be better and happier in the end without it? I would most assuredly advise the giving-up of tea and coffee, or any thing else, when we discover it becomes a task to get along without it. I would teach our boys to be free in every sense of the word, from every appetite or habit, and bow in obedience to God and none else. I am sure, friend N., you approve of the *fruits* of my work, if you do not of the ways in which I arrive at it, for you have said as much in the fore part of your letter.

I am really sorry to appear disobliging to so kind a friend as you have been, friend N.; but from what I have heard of honey-wine and metheglin, I have thought it best not to have recipes given for making them, just because some of our bee-men might drink too much. Some of the smartest talent we have had in our ranks has gone down into obscurity on account of intemperance, and nothing else.

I think I can send a queen to you, but it will have to be very carefully done up, and it may not be possible to get it through by mail. I will make the trial, however, and if she reaches you alive, there will be no charge. Your letter was 41 days in coming to us.

A LETTER FROM NOVA SCOTIA.

ALSO SOME THING ABOUT HUCKLEBERRIES.

IF I were an old bee-keeper, and could get off a pretty interesting and instructive letter from a Nova Scotia apiary, I would have written; but this is only my fourth year. I wintered 64 colonies—42 in bee-house, 22 on summer stands, packed with sawdust 3 inches on all sides; entrance through the outside case to permit them to fly when weather permitted. Those wintered on summer stands wintered well. The 42 in bee-house came out without losing one. There were several needed feeding (5 or 6), and one queenless, and considerable signs of dysentery, while the 22 on summer stands had no signs of dysentery. Out of 64, I didn't lose a hive in wintering. Up to date I have 100 hives. The season was a fortnight later than last year.

The sample huckleberry honey W. P. Wemyss sent you (page 334) set me thinking whether it would pay to move bees 16 miles where there are miles of barren covered with blueberry blossoms so abundantly that an ordinary picker can pick 10 quarts an hour easily when berries are ripe. What do you think? I would have to move them on a wagon.

How do you get your sections of honey without having the cappings gnawed off by bees filling themselves?

A. L. ETHERINGTON.

Milton, Queens Co., N. S., July 21, 1881.

I would by all means move some bees over to that berry tract, friend E. I think our bee-men many times miss it by trying to raise plants for bees, when by carrying the bees a few miles they might find the honey-farm already in full blast, prepared by the bountiful hand of dame Nature.—Take off each section as soon as sealed, and you will not have the bees in that greedy state that causes them to uncap their sealed stores when disturbed. If you wait until the honey-yield has passed, and have blacks or hybrids, I do not know how you will obviate this difficulty, unless you open the hive very quickly and then scramble for the filled sections before the bees can get the cells open. Full-blood Italians are much less prone to this kind of mischief.

FRIEND CASE AND HIS BEE-KEEPING.

HOW HE DOES IT.

I SEE in last GLEANINGS you have the

RASPBERRY FEVER.

As a honey-plant it is hard to beat. I have a row about ten rods long; when they were in blow the bees just swarmed on them from sunrise to sunset, and now we have picked about 200 quarts of the largest, finest berries I ever saw; and as they are what is called an ever-bearing variety, the new growth is just beginning to ripen its fruit. Perhaps I ought to say that my row is nearly three feet thick, and as dense as a hedge, for they withstand the deep snows best when grown in this way.

You inquire about the Cuthbert raspberry. It is known by this name, and also as the "Queen of the Market," and "Conover," too. It is a very fine berry—firm, and good for shipping.

Well, the honey season is past, and a very poor one it has been in Lewis County. I had more honey in 1878 from 45 colonies than I have since had from 100.

TENT FOR WORKING WITH BEES.

Last season I saw your description of the frame covered with mosquito netting that you use to work at your bees with after the honey season is past. I wanted one, but I thought the one you described would not be large enough to use when taking off honey, as I use a box to put the sections in, a basket with unused ones, and wanted room for unfinished sections, etc.; then, too, if I wanted to extract a few frames, or take a frame of brood, it would let the robbers in to raise the frame of netting, as I would have to when I went for the frame of foundation to replace it with. Well, I made one 5½ feet in height, 4 feet wide, and 6 feet long. I find this not too large, and in one end I have a door 3 feet wide, covered with netting, and easily fastened shut, outside or in. I find it works well with this. I can take off honey all day long, and bid defiance to all the robbers in Christendom.

HOW I EXTRACT, FEED, ETC.

About the first of August, as I am taking off the white honey, I look the brood chamber over, and if I find over 8 or 10 lbs. of honey, I extract it down to about that. This I do, both to give room for the queen and for dark crop of honey later. If this is done, I think the first frost will find the bees in much better condition for winter; as, if left undone, many queens will not lay to amount to any thing after this, and it is the young bees we want for winter, and plenty of them too. As soon as we have a general frost over the country for 4 or 5 miles around, I take off the boxes, and when I do this I look over the brood-nest once more, and this is the last time for the season. Now, I put on the quilt and mark each hive that needs feeding, the number of pounds that, in my judgment, it will want.

HOW TO FEED.

Give time for the brood to hatch, and then take the best granulated sugar, and to 2 pails of sugar put ⅔ of a pail of hot water. I put it right in my extractor, and turn until it is dissolved. Now I can draw it off as I want it. I take six-quart tin pans, as large a number as I want to feed in one day, and over the top put a piece of cheese-cloth bandage; fasten this with a string on the outside, just below the wire; give the bandage slack enough to reach the bottom of the pan, and place a small stone in the pan and on the cloth to hold it down. Set this on the frames, over the brood-nest; fill it, and daub a little on the outside, if they do not come up without. A strong stock will carry a pailful down in one night, and then if you want to feed more to the same stock, all you have to do is to fill it up again until they have enough; and let me say this when you are feeding: Don't stop when you think they have enough feed, until you *know* they can not starve; then set them in a frost-proof and quiet cellar when winter has set in in good earnest, and not before, and next season you will not be beeless.

N. F. CASE.

Glensdale, Lewis Co., N. Y., Aug. 2, 1881.

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A FEW WORDS OF EXPLANATION.

FROM A. I. Root's comments on my article on page 376 of GLEANINGS, all would infer that I had reared all the queens I sent out with the "unnatural" "tinkering" way. The careful reader of my article will see, if they will re-read it, that I reared queens only by the transposition process, to supply the lack arising from not having but three queens I cared to breed from, so when these could not be kept swarming I reared by the transposition process. Again: In my circular I say queens shall be reared by natural swarming, "*as far as possible*," and that is just what I have tried to do. I may have failed to word my advertisement just as I should in July GLEANINGS; but if so, I think nothing serious will result therefrom, for I believe that four orders is the *total* that I have received from that source. Friend Root also says I have "criticised the way friend Hutchinson, and the rest of us who have raised queens, quite a little." I did criticise Novice's way of using old bees for queen-rearing, and I do so still; but I believe I never criticised friend Hutchinson. Friend H. took me to task for what I wrote in *A. B. J.* about Nellis' advice (after Aug. 20) that then was the time to rear good queens; from which there sprung a friendly discussion about late queen-rearing between H. and myself, in which the *very important* fact came out, which was, that H. fed his bees *plentifully*, while queen-rearing in the fall, which made a very favorable showing for him over many of our queen-breeders.

Once more: The caution mentioned, about the bees throwing out the transposed larvæ and using their own, don't apply to the mode which I gave in my article. Where the caution is needed is when there is no queen in the hive; but with the queen just laying in queen-cells the case is different; for if larvæ are removed, the royal jelly is removed also, the cell cleared out, and the queen lays in it again. There is no need of bees changing larvæ with a laying queen in the hive, and, as far as my observation goes, they never do it. If any one has known where such a thing has been done, will they please report? From close observation for a number of years, I have found that no food is ever placed in a cell till the larvæ have emerged from the egg; that in case of a larva in a worker cell, it is usually fed as a worker for from one to two days before the cell is enlarged for a queen-cell, and that the cell is never enlarged clear down to the base, but that a small portion of the worker cell remains out, of which the larva is floated with royal jelly about the third day, where bees rear queens from eggs deposited in worker cells. Where an egg (placed in a queen-cell) is designed for a queen, it has no food placed around it till it hatches, when it is fed sparingly (so to speak) for 4 or 5 hours, after which an abundance of food is given till sealed over; and that the cell is broad and large from the time the egg is laid till the queen hatches. Now, if what we have observed is correct, and we take from a queen-cell a larva from two to four hours old, reared in natural swarming, and place therein another larva of the same age, what is the difference in favor of the former larva? I see none. On the other hand, if we force a stock to rear a queen at times when the swarming impulse don't demand a queen, will it be as apt to be reared with as favorable conditions as when the instinct implanted in the bees by the Creator of all things tells them to multiply and replenish the earth? Again: Will old bees, which return to their old stand to find brood, queen, and nurse-bees all gone by removal, and a frame of eggs in its place, have the same instinct to rear a queen, the same stomach to prepare royal jelly, and the same large roomy queen-cells for the perfection of the embryo that a stock does under the impulse of natural swarming? I only throw out these points in a friendly way for discussion or thought, that we may gain light on this *very* important branch of our industry.

G. M. DOOLITTLE.

Borodino, N. Y., Aug. 4, 1831.

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STATISTICS IN REGARD TO OUR WINTERING LOSSES.

THE *American Bee Journal* for July 20 contains a valuable statistical table in regard to the losses of bees. If I am correct, this shows that the losses of bees kept in the L. frame are less than in any other, or, in fact, all others, in spite of the plea that has so often been urged against its shallowness. It also shows that box hives stand no chance at all, compared with frame hives, in point of losses. On this point, I would suggest that putting frames into the hives may not have any particular advantage in wintering, so much as the fact that bee-keepers having frame hives give their bees a much more intelligent management. Protection by means of chaff, leaves, etc., is also far ahead of no protection, as the most careless observer has doubtless gathered ere this, from the reports we have been having for months past. Cellar wintering, for last winter, was far ahead of all; and were winters to be all like that, we should know pretty well what to do. Whether these reports were taken so as to include the losses through April, does not appear; and, in fact, it would be hard to get at this, from reports sent in at many different times. As many of the great losses occurred through April, this is a very important point. The losses in the cellar sum up to 32 per cent; outdoors, with no protection, run up to 85 per cent. The item in bee-houses I do not quite understand, from the fact that we have bee-houses made only for wintering, house apiaries, and wintering-houses partly under ground, partaking greatly of the nature of cellars or caves. I should suppose that it at least included the latter, as the per cent of loss is only 21. In regard to the kind of hive used, I copy the summary as given:

	NO. IN FALL.	DEAD IN SPRING.	LOSS, PER CT.
Box hives	211,732	187,705	.89
All-frame hives	309,498	142,307	.46
Langstroth	195,957	83,965	.42
Other frames	113,541	58,342	.51

Our thanks are due the editor of the *A. B. J.* for the labor he has spent in compiling this very valuable showing.

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FRIEND BROOKS, AND HIS EXPERIENCE IN WINTERING.

SINGLE-WALLED HIVES.

FRIEND ROOT:—I will give you my report of last winter's losses before I am too late. Fall is again upon us, and we should now begin to prepare our bees for the coming winter. Last fall found me with 53 colonies, made during the summer by dividing, which I overdid, considering the poor season that followed; besides having a good demand for all the queens I can rear, I *spread* them a little on that account. They were rather strong in bees, but the majority of them needed feeding. Thinking perhaps they might fill up from fall bloom, I waited; but it failed. I then commenced to feed sugar syrup about the last of September. Had the weather continued as warm as we usually have it, all would have been well; but you know what happened. Winter set in earlier than usual, and of course the bees did not have time to seal up their stores. We had our first snow Oct. 17th, and on the 19th another, 2 inches deep. It kept gradually getting colder, with deep snows, when, on the 19th of Nov., the temperature fell to 10° below zero, and on the 22d, to 12° below. Dec. 3d, the weather being warm and pleasant, the bees had a good fly. It commenced to turn cold on the 6th, when I put 47 colonies in the cellar. Of the 6 left out, 5 were in hives packed—one with fine charcoal, two with sawdust, one with chaff, and one with turning shavings. One colony I prepared as an experiment to winter out on a summer stand in a single-walled hive, and only wish now that my whole 53 colonies had been "experimental" ones. Sunday, Jan. 30th, the temperature being at 50° in the shade, I set the bees out of the cellar. They had a good fly; found 6 colonies dead. Feb. 1st the temperature fell to 6° below freezing when I put them in the cellar again, and on the 22d, the day being warm, we set them out for a fly, and found 6 more colonies dead. Returned them to cellar the 23d. The 26th I let them fly again, and returned them on the 28th. March 10th being warm (52° in the shade), I set them out, and noticed young bees flying from a few of the strongest colonies. As the rest of the month was rather pleasant, I left them out. They commenced to breed nicely, when along came that April snap, and away went 6 colonies more, taking one of those in the sawdust-packed hives, and reducing almost all the others to a mere handful. Had I put them all back into the cellar at that time, it would have been well; but the weather had been so pleasant, I thought it would soon change for warm; but was disappointed. I had a *genuine* case of spring dwindling on my hands. The 4 remaining packed colonies were in moderate condition only, having lost fearfully in bees, like the rest. They built up so slowly after settled weather came, that I finally set the bees out into single-walled hives, and let the sun strike them, which seemed to help them, as they would fly with the rest. The packing being so thick, the sun did not warm them. The experimental colony was a division like the rest, and reared their queen from a cell given them. After testing her I did not open the hive until ready to fix them for winter, when, to my surprise, they had their combs full of sealed honey from top to bottom, except the 4 central combs, which had a little brood next the bottom-bars. If there ever was a case of "bees crowding the queen," this was one, as the colony was rather weaker than I liked to risk on the summer stand. However, I lifted their colony with 5 of their combs, placing them in the center of a *single-walled* 15-frame hive, having a large portico to shed rain and snow; faced the hive south, and put in two tight-fitting rubber-bound division-boards, leaving them up ½ in. from the bottom. I then hung the extra combs in the ends close to the divisions, so the bees could take out the honey if needed. On top of the frames I spread a *new* clean woolen cloth, and a 4-inch thick chaff cushion on that; contracted the entrance to about one inch, and they were ready, let come what would; but after I felt the cold that *did* come, I felt a little uneasy about them, but concluded to let them alone. I did not open that colony until spring. The result was, that they had lost less bees, and were in better condition, than any other colony I had. They did not dwindle down in spring, but went straight ahead increasing, until they had filled the whole hive of 15 combs, and was the first one to swarm, which was no small one, from a hive of that size.

Now, after all the reports and causes assigned for our losses last winter, have we found the *true* cause? Although I had only *one colony* to winter *successfully*, I think I have learned *why* it did so, and will give the *causes* of success, the reverse of which I believe was the cause of failure and loss. First, this colony had only what combs they could cover, of nice sealed honey. Next, the divisions were plain, simple boards, which did not *absorb* and *retain* dampness, as chaff cushions or divisions are apt to do. Next, the cloth or quilt covering the bees was new and clean, allowing the chaff cushion on top to draw dampness from them, which enameled cloth, and propolized quilts would not allow (I examined my dead colonies, and found them as wet as if a bucket of water had been poured on them; the quilts being covered with propolis, no moisture could pass off at the top, but seemed to condense and drop down on the bees). Next, the hive facing south, and being single-walled, the bees received the full benefit of the sun, and would often be seen flying at noon, when those in packed hives were still. Next, the dead-air spaces at the ends of the hive, I believe, are as warm as if packed, and a great deal dryer. This colony never showed any signs of dysentery that I could notice, either in the hive or out, while *all* the rest had it badly.

The present season has been any thing but favorable. Bees had the full benefit of fruit-bloom, which helped them greatly. The white clover, what little we have left (after severe droughts each summer), yielded well; but our usual drought cut it short again; and unless it rains soon I fear our fall harvest will amount to nothing, and very likely the bees will have to be fed for winter.

JOS. M. BROOKS.

Columbus, Ind., Aug. 9, 1881.

I am inclined to think, if you *had* fixed all your bees as you did that one, friend B., they would not have wintered as *it* did.

The "Growlery."

This department is to be kept for the benefit of those who are dissatisfied; and when anything is amiss, I hope you will "talk right out." As a rule, we will omit names and addresses, to avoid being too personal.

MONEY LOST IN THE MAILS.

I SENT you some money for some articles that you have advertised in your price list of implements in bee culture. It has been nearly a month since I sent it. I would like to hear from you, whether you have received it or not, or whether there was any mistake about it. If there was, please send what articles it will pay for, and oblige—

H. L. PHLEGAR.

Pembrook, Giles Co., Va., June 26, 1881.

You will notice, from the above, that our friend gives plain directions what to do in case there *was* some mistake in the order, but none in case the order was *never received*, which would seem to imply, a very little, that he is pretty sure we got it. We wrote him we were very sorry to say his letter had never reached us, and asked particulars as to how he sent it, etc. Here is his reply:—

I inclosed the money in an envelop, just as I have been sending to other firms, and received goods promptly.

H. L. PHLEGAR.

Pembrook, Giles Co., Va., June 22, 1881.

Friend P., your reply is certainly unkind, and it seems to me, just a *little* uncivil. Suppose you *have* sent to other firms, and received your goods promptly, does it follow, necessarily, that we have received your money and won't send the goods? I admit that our mail facilities are excellent, and that perhaps not one letter in a thousand is lost; yet, where a house gets 100 or more letters a day, as we do, there would be one lost every week or ten days. There has got to be a first time with everybody; and because you never have had a letter lost or stolen, have you a right to say you do not think this one was lost? To put the matter where you can see it squarely on both sides, I wish you to answer this on your honor, as a man: If you were in my place, would you send out goods you were selling at a very close profit, without ever having received a copper for them of anybody? I know how it vexes one to have his money lost; but, my friends, after reading what I have put in our price lists about sending money, do you not take the risk upon yourselves, when you voluntarily decide to send without registering or postal order? I gave this much space, because this seems to be one of the most trying things in business to adjust. I would willingly and gladly bear half of such losses, but I am in danger of doing harm, even in this, as you see in our price list.

You have been sending you journal, GLEANINGS IN BEE CULTURE, to Chester Robbins. To-day he was here and refused to take one out of the office. He says they are not worth the paper that they are wrote on. Do not send any more, as we don't want it around the office. He is very much displeased with you for sending them.

H. SAYERS, P. M.

Sherwood, Branch Co., Mich., June 6, 1881.

Well, now, I declare, friend S., it is too bad that anybody has been annoyed by sending them some thing they did not want. Mr. Robbins certainly subscribed and paid for GLEANINGS in January, unless we have made a great mistake somewhere. Had he written us himself, we would have stopped it most cheerfully, and returned the balance of the money that was due him too. "Not worth the paper they are 'wrote' on!" Why, that's a regular "stunner" on our humble efforts. Now, friends, I just tell you what; you who have scolded because we stopped GLEANINGS when the time expired, please consider that we don't know but you think just like friend Robbins; and it would be the height of ill manners to keep sending it in that case. "Not worth the paper—!" whew! I guess, friend R., we shall have to wake up and make it better, if *that's so*.

THE girls in our office have the *autograph* fever at present, in its most "striking" form; but, unlike most phases of the disease, they have vetoed "quotations" all together, and strictly insist on originality. Some of the productions are very good indeed, and I have taken the liberty of borrowing a couple, without their knowledge.

The first is Lu's, which, though hastily written, is pretty 'cute, and contains names familiar to many of you:—

Ah, well! some "jolly" hours we've known
Amid the hum of business and of bees,
For bees and business here are one,
Tho' honey comes by slow degrees,
Tho' we've no drones to drive away,
We have a "good queen, Bess,"
And many a royal prank we play;
But some — we won't confess.

Even Ellen M., and Wally, too,
And Carrie the demure,
Join in the fun, while "Boss" looks on
(Does he wish that we were fewer?)
Then Addie and Ida, Stella and I,
Geo. Washington, Mary, and Cherry,
And Ten, who's growing toward the sky,—
How can we be aught but merry?

The next one is Carrie's.

May you trace in the book of life, my friend,
Deeds noble and good and true;
Be every page to the very end
Spotless, and fair to view;
And when the mighty volume is closed,
And you stand by the great white throne,
May you hear the voice of the King of kings,
Saying, "Faithful servant!—well done!"

WATER AND SUGAR, FOR SHIPPING BEES.

THE OLD BOTTLE QUEEN-CAGE, AFTER ALL.

IT would seem that my old idea of a bottle of water, and pure sugar, for bees during the intense heat of summer, or for long shipments, is to be the old stand-by, after all. I noticed that the Cyprian and Holy-Land queens sent us by friend Jones last year came with sugar and water, and an abundance, too, of both. In the *Canadian Farmer* of August 3, friend Jones tells how he prepares bees for shipment from these foreign ports:—

> It is a very difficult matter to import them to this country. Those colonies I bought in Palestine I had sent down to the coast, and had them forwarded by steamer to Cyprus. There they were transferred from the cylinders into movable-frame hives. I then made a box about 4x5x6 inches, out of pine lumber. I put a screen on the bottom and one in in the top, each about three inches square, to let the air pass through. In one end of the box I fixed a bottle filled with water, and having a cork through which a cutting was made for a wick. Through this cutting I drew a cotton wick, and by capillary attraction this wick is kept wet with the water, and the bees drink and then eat some granulated sugar, which I fastened upon the other end of the box by pouring it in hot and allowing it to cool. Between the bottle and the sugar I had a comb with a little syrup in it. There was a queen, and from 160 to 300 bees in this box. I had a crate made to hold 27 of these boxes, and they were separated from each other by about an inch and a half, so that a current of air always passed around every box. I have some bees that were kept six weeks in that way, and during the whole time they were flown only once; that was when I arrived in London. Some of the bees appeared to need this, and others did not. The water was very bad, and I have given instructions that in future consignments the water should be boiled before being put into the bottle; this will purify it.

The Viallon candy answered admirably until the great heat and drought of July, and then we found 11 queens out of 21 dead, in a single shipment from Viallon himself. They were about 5 days on the way; but when the air is so very dry, and the weather so very hot, water seems an absolute necessity. Besides, with the water-bottle, if any error or delay happens, the bees are ordinarily safe for at least two weeks. This is, of course, where the water and sugar are separate, so there can be no daubing and stickiness, and no fermentation of the water and sugar.

HOW TO GET HONEY—AND MONEY.

BY A TEXAN FRIEND.

HOW to prevent an increase of stocks, and at the same time keep the bees working vigorously during the swarming season, and cause them to store honey instead of spending their time and energy during a honey yield in attempts at reproduction, is a problem that interests bee-keepers who find more profit in raising honey than from the sale of bees and queens. Every bee-keeper has noticed that a swarm of bees placed in a new hive, and given a new location, will do more work in a given time than will the same number of bees in almost any other condition. It is also known that, during the swarming season, the flowers yield honey in great profusion. Now, how to preserve the colony intact, and get the benefit of the business energy peculiar to a new swarm out of the whole thing by causing them to store honey instead of raising queens and bees, is the question. I hardly think any plan will *always* succeed; but I will give you the most successful one I have ever tried.

Try to prevent swarming by giving the bees all the room they will profitably use; but, if they are not satisfied, and swarm out anyhow, capture the swarm in a box or empty hive; place them in a cool shaded place in the dark, with box slightly raised to give them air. The shade of a tree or house will do, and a stick under the edge of the hive will give them air, while a thick blanket or bed-quilt spread over the box, and allowed to come in close contact with the ground all around, will produce the darkness needed to keep them quiet. Place an empty hive where you wish to locate your new colony—any place away from the old stand will do—and, after sunset, when the bees are all in, bring the hive that cast the swarm, and the box containing the swarm, alongside your new hive; shake the bees from one or two combs near the entrance to the new hive, and, after removing the queen-cells, place the combs in also. Now shake your swarm down with the other bees, and let all go in together. While the swarm is going into the new hive, take the other combs from the old one, shake off the bees with the others, remove the queen-cells, and place them (the frames) in also. Add another story, if necessary, with your surplus arrangements, and lean a board in front of the entrance for a day or two.

If you have done the work properly, and removed *all* the queen-cells, you have furnished all the conditions the instinct of a new swarm requires, and preserved the united strength of the parent colony and the swarm intact, and the reunited colony will work as vigorously as a swarm hived separately from the parent stock. "To sum it all up," the bees have started queen-cells under the swarming impulse; they have swarmed out from the old hive with the queen, and forsaken their old location. You have given them a new home, a new location, and plenty of room, and their reproductive instinct is satisfied—at least until they have filled the space you have given them; and if they are judiciously managed, by removing the stores before they are too much crowded, they will, nine times in ten, remain satisfied throughout the season.

I do not expect you, and others who are more interested in the sale of queens and bees than in the production of honey, to feel any interest in what I have written; but we who can get more cash out of honey than from the sale of bees, or who, from various causes, find our supply of hives running short when it is impossible to obtain more in proper time, will ever feel an interest in any plan that may save our bees and direct their energy at this particular time to the production of that which will bring us the most solid comfort—cash.

While writing this, I have tried to keep one of the babies quiet by holding him on my knee, and another by talking to it and petting it in various ways, while the "madam" and the other seven young "Texans" are out for a stroll. If my ideas have been poorly and disconnectedly expressed, I plead the circumstances an excuse. J. J. TAYLOR.

Richland Springs, Tex., July 20, 1881.

Now, you do me injustice, friend T., for I *am* interested in comb honey; in fact, I have done just what you mention, and know it will work. I am really afraid I am interested almost as much in the *nine* young "Texans" you mention incidentally, as I am in the honey. Give them my love, and make your best bow to the "madam," for me, and give her my respects. I should dearly love to just go and make you all a visit.

BEES STINGING A TEAM OF HORSES, AND SOME OTHER MATTERS.

FROM OUR WISCONSIN "A B C CHILD."

BEES are doing well now, working hard on second crop of red clover. I examined some, and found the tubes nearly full of honey. I wintered 24 colonies on summer stands; lost one in glass hive. My bees have been swarming every day since May 28. I have trebled my number, but I use full sheets of fdn. I have been obliged to enlarge my hives (Langstroth) to 10 frames, and space combs 1½ in. from center to center. Basswood did not yield a drop, although it bloomed freely. The season is not as good here as last year so far. I have returned swarms to keep them in boxes, or else should have had no surplus. As it is, I have 700 lbs. white comb, and 500 or 600 lbs. extracted, with fine prospects ahead for fall yield. I have 3 Cyprian queens. They are very prolific, and go into boxes readily.

Now, friend Root, I for one protest against your paying for money sent H. A. Burch & Co., as they advertise quite as much in *A. B. J.* as in GLEANINGS. Several here sent him money one, two, and three years ago, and heard nothing from it except promises, from time to time. These all took the *A. B. J.*, not GLEANINGS.

BEES ON A RAMPAGE.

I read in A B C of bees on a rampage. Well, we had just such a case here yesterday. My father-in-law, living 3 miles away, has 13 swarms of bees, and as the team passed them with a load of oats (where they had been driving the whole season without any molestation), they became enraged, and sallied out *en masse* upon the horses and driver. So sudden was the attack, and in such great numbers, all bristling with venom, that, instead of an immediate runaway, the team just stood fixed, pawed, and fairly screamed aloud like wild beasts. Three men were on hand, and did all in their power to get them away, but no go. The swarm increased until their heads, necks, and chops, were covered, the men all the time rubbing them off, killing them by thousands. One horse fell exhausted; its life is despaired of; the other is slightly better, while the men fared little better, one of them fainting before the horses were cared for. The women folks, too, have their eyes shut. A calf was nearly killed. I hastened to the scene, and found the horses rolling in agony on the barn floor. We gave brandy, and applied ammonia, and covered them with mud; but they still refuse to eat, and their eyes remain shut. Their ears hang down like junk bottles. The folks are suffering intensely. I picked 103 stings out of one horse's ear. What could have caused the attack? There was at the time a fine honey flow from 5 acres of buckwheat, not 200 yards distant. It was at 8 A.M., when they were busiest gathering. The bees are from my stock, and reared from gentle Italians. The 13 swarms are the increase of 3 wintered—one strong, 2 weak, in spring; the third swarm fill an 8 frame L. hive, and 3 cases of sections at a time, and have given 30 lbs. surplus, while first swarms have given 100 lbs. He refused $10.00 for the queen of the best hive (reared last season;) she filled 20 L. frames with brood before swarming; her hive swarmed 4 times, and all were large swarms. If the horses die, I will let you know. The men are unable to stand up yet, being stung mostly in the head and face.

Do you want any queens or bees? I can send you some choice Cyprians, mated Italian drones. I can send you 40 bushels of bees at 80c per lb. if you wish.

E. A. MORGAN.

Arcadia, Wis., Aug. 5, 1881.

Friend M., I can hardly explain the rampage you describe, but by supposing that the bees had some way got to robbing, unless the queen you mention had met one of your Cyprian drones, and it was the taint of a foreign blood, somewhat akin to the Egyptian strain. How near was the team to this hive? It may be a good lesson to us, to be a little careful how we drive horses too near hives of bees. I presume the horses were in a profuse perspiration.—I have answered about Burch in another column.—Have plenty of bees now.

BEES IN NEBRASKA.

I HAVE been watching GLEANINGS for some time past for reports of bee-keepers in Southern Nebraska. Up to this time I have seen only those of friend Miles, of Pawnee City, and Mrs. Martin, of Tecumseh. Even these reports were not full enough to give us any idea of the condition bees were in, in their respective neighborhoods.

I am an A B C student, and as a matter of fact, I should like to hear oftener from friends, just how the precious bees pulled through the long cold winter. In this section, the winter of 1880 will never be forgotten by any class; no difference what the avocation was, it fell on all alike. At the same time, I am of the opinion that our brothers in bee culture suffered most; and among them here I will give the names of Jerome Wiltse, of Rulo, Neb., and George Schock, of Falls City. Mr. W. lost all his apiary, which numbered about 200 first-class colonies, except some 7 or 8, which pulled through in very bad condition. Mr. S. came out a shade better, with perhaps one-half. Through the country generally, there were a great many bees; but so far as I have made inquiry, nine-tenths died during the winter, and, as a matter of course, the people are considerably discouraged, and will hardly embark again very soon in bee culture. Just here, friend R., let me ask you, if the secret or success of raising bees, especially in the North-west, doesn't depend mainly on the way they are wintered. It seems to me that the heaviest losses last winter were among those who have been keeping bees for a great many years; and still, from some cause or other, the "amateur" met with as good results as those who have expended thousands of dollars in ways and means by which they could give to the world the true principles on which we could rest with entire confidence, that, after the labor of summer was over, and the harvest gathered in, our purses replenished, and our hearts thankful to a kind heavenly Father for his goodness in the past we could feel that, when we had carefully packed our bees for winter, with an abundance of stores, they would come out in good condition in the spring.

It has been extremely hot here for the last five weeks, burning every thing up, and one would naturally suppose bees are doing no good. From the 15th of May to the 12th of July they did remarkably well for this section, raising brood in abundance, and storing considerable honey in the brood-nest. But to-day their storehouse is as barren as the desert; have no pollen either. The only hopes I have are in feeding them until it commences to rain. If it don't rain very soon they can not gather any stores for winter; and hence, feeding is the only salvation. W. C. HAVELY.

Falls City, Nebr., July 25, 1881.

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H. A. BURCH & CO.

FRIEND HEDDON'S REVIEW OF THE MATTER.

FRIEND ROOT:—As one who has no ill will against any one, and a lively interest in universal justice, I wish to remonstrate against the practice of vicarious financial atonement, as proposed by you in case Mr. Burch should fail to satisfy those who have sent him money for bee-keepers' supplies. Because Mr. B. advertised with you, is that any reason why you should become responsible for his good luck, good judgment, good management, good health, or good intentions, any or all of which, the whereof might cause Mr. B. to fail? You have given a list of some of those who complain of loss. Before you can consistently pay these men, you must first have positive proof regarding the transaction. If a man ordered bees last April, and Mr. B. ships them this fall, there is certainly a loss, which might amount to as much, or more, than all the money sent. How much are you going to pay in such cases? How do you determine that the purchaser ever patronized or even looked into your GLEANINGS? How do you know but that he saw Mr. B.'s ad. in some other paper? Are you not a little reckless in proposing such a performance? If you continue to make such proposals, had you not better *carefully* consult a reporter who *knows* the standing of each one who proposes to advertise, before you accept the advertisement? Would it not be still better, when an ad. is proffered, to get (unknown to the dealer) a report of his stability, and insert it with the ad., and then let us take our chances? We then know as much about the matter as you do, or can. I hardly think that many of these complainants would desire your interests sacrificed to theirs, in a matter in whose financial interests you play so minor a part. I am sure I would not have the stain on my memory of taking a cent from you. Your agreeing to become responsible, makes no difference as to the justice in the matter. In my opinion, martyrdom never paid a dividend on the investment to *any* of the parties concerned. Never!

In regard to this failure of Mr. Burch, numerous parties have written to me to find out what I know about the firm, stating that they saw my "recommend" in his circular, and knowing I lived in an adjoining county. Will you give me space to say to such inquirers, that in the fall of 1880 I visited Mr. B.'s apiary, and found not only system and order, but as fine-looking and active bees as I ever saw anywhere. These colonies had been carefully fed during that season, under the skillful management of Mr. King, of South Haven, as directed by Mr. Burch. I never visited an apiary which was more universally "*three-banded*." I made these remarks to Mr. B., and during the winter he asked me if I was willing to state this truth to the public through his circular? Notwithstanding he was selling full colonies at less price than I could afford to (thus making my recommend of his bees work against my own interest), I could not crawl into so small a place as to refuse my signature to a *fact*, and gave it. I recommended the bees only.

In regard to the financial standing of Mr. B., I know nothing. I make it a point to trust men with great caution till I do. What business of trust I have ever had with Mr. B., has always been fully and promptly discharged. I never heard of his failure to fill orders received till within the last sixty days. I *know* no more of the *reason why* he fails to ship, than any other man. I do not even know who "Co." is. From my acquaintance with Mr. B., I am inclined to *think* he intends to ship his orders to the best of his ability. I think his mistake has been in overestimating his ability to supply, or underestimating the demand at the prices he quoted bees—probably both.

Such stock as Mr. B. advertised was worth more, and cost more, than the price he put upon them. Eager to avail themselves of a good bargain, orders and money came in, *far in excess* of Mr. B.'s ability to supply, after the winter had reduced his fine large apiary to fifteen surviving colonies, which, I am credibly informed, was the case. I want to say here, that those who have had no experience have but a faint idea of the amount of cash, cost, and labor, involved in a season's dealing in supplies. Without great *caution*, as well as good judgment, one is very apt to far overestimate his ability to fill all these odd-sized and complicated orders with promptness. To do so requires no small capital. The man who expects to use his remittance money to carry stock with, will run a short race in the business, and wind up covered with blame. If tact is required to successfully produce honey, the *essence* of it is demanded to successfully "supply producers, and give satisfaction to the reasonable," to say nothing of the growls of that class who are totally bereft of that grandest of all God's gifts. I think there are few men among our ranks who will willfully betray the confidence of him who sends his money confidingly to a stranger. When one that places all the power in you, can you but do *every thing* within the bounds of reason and justice to satisfy him? In my judgment, more failures and consequent losses arise from too much hope and too little caution, than from all other sources. *Hope* may be called mental ease; *caution*, mental energy.

We all sincerely hope that the next 30 days will put a brighter look upon the face of this first failure in the ranks of reputable dealers in our goods. However unable any of us may have been to do so in the past, let us all strive to do exact justice to each other in the future. JAMES HEDDON.

Dowagiac, Mich., Aug. 5, 1881.

Many thanks, friend H., for so kindly taking my part. I do not propose, as I have already said, making good the losses of my advertisers by delays in shipping, etc., but I *do* propose to pay back the money any one may lose by sending it to some one who makes no returns for the money sent. In doing this, I only try to do as I would be done by. If I go into the store of some one I know and rely upon, and some person in that store takes my money and returns me no equivalent, I should expect the proprietor to make good the amount lost. He must learn not to keep such on his premises. It is true, I do not know who saw the advertisement in GLEANINGS; but I believe they will tell me pretty nearly the truth when I get ready to ask them. You would, friend Heddon, wouldn't you? I do know all who advertise with me, pretty well, and if I lose in this case, I shall have to conclude it will be better to keep a little tighter rein on some of you than I have done. I think friend Burch is going to fix it all up himself, excepting perhaps the damage to his customers, resulting from the delay. He can regain confidence another season, if he chooses, by advertising that the cash need not be sent until the bees are received.

QUEEN-REARING.

QUEENS GETTING LOST ON THEIR WEDDING TRIP; CAUSE AND REMEDY.

SOME of the friends speak of heavy losses from young queens failing to return to their respective hives after their wedding tour, and are solicitous to ascertain the cause and remedy. Much can be done by the apiarian to save these losses. I am not of the opinion that many queens are carried away by birds; some may be, but the greater number of queens lost is occasioned by entering the wrong hive on their return. The number of losses may be diminished very much by doing away with the systematic arrangement of the queen-rearing colonies. Even if the hives are 12 or 15 feet apart in rows, and there is much similarity of appearance of the hives, often queens, as well as bees, will make a mistake and enter the hive at either side in front or in rear of the hive in which they belong. If this is the arrangement of your apiary, and on account of appearance, or for want of room, you must continue to have it so, you will find it a great aid to your queens in returning to their own hive, if you will take the precaution to cut some green bushes or weeds, and place them over and about the hives in such a way as to give a diversity of appearances to those hives having queens nearly old enough to fly out. This is a great aid to them in marking their place. Mere color of hives will not do. It is not a good plan to be among the hives, opening and changing the appearance of them where queens of proper age might be on the wing, especially from 12 to 3 o'clock P.M.

After the usual hours have passed for queens to fly, and you are aware that you have had some queens that have flown from their hives, it is well to look into these hives, and if the queen is not there (usually the bees, on disturbing them, will manifest the absence of the queen by that peculiar doleful sound made by fanning their wings; some colonies manifest their loss with greater intensity of emotion than others), it is well to make an effort to find her, and when you do find her, especially when you are behind with "orders for queens," you will feel better than you would had you gotten a small fortune. But you say, "Where shall I look for her? if she has got into some other hive it won't pay to open the 'whole business' to find one queen, and then, may be, she is not in any hive, so I'll let her 'go to the dickens.'" But generally there is a pretty sure indication of the whereabouts of the lost queen if she is in the wrong pew. When a strange queen enters a colony already supplied with a piece of furniture of this kind, the bees will ball the strange queen to give themselves time to look into matters; and either the bees, in their eagerness to kill the queen, sting each other, or else the queen, in trying to free herself, stings the bees, I am not yet sure which; at all events, shortly after a queen is balled, if the colonies so retaining her has a queen of their own, the indication of a strange queen is in the fact of a number of bees just stung and carried out. Now, when this is seen, it is at all times (if no robbing or fighting has been going on), better to open the hive; and if the queen has not been balled too long she will be found all right, and she must then be caged a few hours among her own bees before liberating her, being sure to have food accessible to the queen, as bees will not always feed an unfertile caged queen. As a general thing, queens that are lost from their own hive will be found in the hive at either side, or the hive immediately in front or rear of the hive in which she belongs, and these may be looked into — examining all the combs and sides of hive for the ball of bees, before the "sign," dead bees, are thrown out of the hive. I have saved a great many queens by this timely attention. But nearly all of this trouble and loss of queens may be saved by scattering the queen-rearing colonies about through your orchard, among bushes and weeds, and facing their entrances in different directions. It takes more time to "go the rounds," but it will pay in dollars and cents.

This has been a pretty fair season with us. I had only 16 stands to begin with, and they were so weak they did not start brooding until some time in April, and there was not one young bee hatched until the 8th of May; yet I have increased them from 16 weak things to 70, all in prime order for winter. Of course, I had all my combs saved "to go and come on," and, as friend Hutchinson says, these empty combs are a great "institution."

The queens of these old colonies were so forced and overworked by giving them so much comb to fill with eggs, they were nearly all completely exhausted by the close of the honey harvest, which ended with us the 12th of July. I have now a young laying queen in each of my hives, artificially reared, but that don't scare me a bit, as they will average as prolific as any other 70 naturally reared queens in this country. Where is the use of so much talk about natural and artificial queens, when it is so small a matter to transfer larvæ just hatched, from any stock into cells containing royal jelly, and have them receive as much, or more, royal food than they get by the natural process? J. A. BUCHANAN.

Huntsville, Logan Co., O., Aug., 1881.

Many thanks for your excellent hints, friend B., right where I am sure they will help. Our hives are pretty near, but as the entrances face all points of the compass, we have very little trouble from young queens getting into the wrong hives. A queen, while being introduced, often takes wing, and I have several times found the boys sorely troubled, when I would be able to find the queen almost every time, by just the plan you have given, and the boys were just about as glad to find her as you have expressed it. A queen that gets lost by flying away, under almost any circumstances, can usually be found by one who understands them. They almost, if not quite, invariably come back to where they started off, and a glance at the hives in the vicinity will often tell where they have gone in, or attempted to enter. It is wonderful, how one's wits may be sharpened for such work, if he set right resolutely to it.

Heads of Grain,

From Different Fields.

REPORT FROM A 16-YEAR-OLD BEE-KEEPER.

PA has 69 colonies of bees, including a few nuclei. The most of them are strong. We have fed nearly a barrel of grape sugar. It is a great help to the apiary. This has been a good season for bees. We have several colonies of four-banded bees; the fourth band is easily seen as they crawl over the combs. My brother David introduced an old laying queen from a strong swarm to a swarm of young bees. She stopped laying a week or more, and then she laid a few drone eggs; then she stopped laying for a week or so. To try an experiment, he transferred her to a nucleus hive, when she immediately began to lay as well as ever, and is still at it. The Spider plant is a perfect beauty. The bees swarm on them in the evening. The Simpsons will not bloom much this year. There are five or six hundred plants of both kinds. The bees work on the catnip as much as on any other plant. Our grapes have never been injured by the bees. We expect a good honey-flow this fall. I am 16 years of age. The bees are mostly in my care, and I have a good many other chores. We are adopting the L. hive. My brother made out the spring report.

JAMES W. KIRK.

Columbus, Cherokee Co., Kan., July, 1881.

GOOD FOR A BEGINNER.

Since I received specimen copy of your paper, I bought one hive of bees, strongly marked Italians, for $7.50. In early June I divided them. Last week I got two *large* swarms, same day, one *very* large, the other larger. I did not see the first coming out; they had settled when I saw them first. An old bee-keeper, who helped me with both, Capt. Hill, says he never saw two as large swarms come from one, and never knew two from one the same day, and insists that the first is a "stray." But the only evidence is, that the bees of one swarm are cross, while the others are not. I can scarcely go near the stand now, while before I could handle them with impunity. Besides the three new swarms, I have taken off 11 lbs. of honey, and another box almost ready to remove, so that I do not want to see my name in Blasted Hopes.

A. KILPATRICK.

Valencia, Butler Co., Pa.

It is scarcely probable that one colony should send off two strong swarms the same day. I think Capt. Hill is right, and that the one you mention came to you to help build up your apiary. Accept it as a gift from God, friend K., and care for it accordingly.

GRAPE SUGAR.

I wish to add my testimony to the soundness of your instructions respecting the use of grape sugar for building up, etc. (Oct. No., 1879, p. 384.) I am now realizing, from such building up, having my bees strong, and bringing in honey so fast that I am puzzled how to stow it away. The sugar, honestly used, is a great help. I should have been sorry last fall if you had said, "Don't use it;" so when you promise to discard such advice, out of deference to special friends, remember your A B C class.

GEORGE ADAMS.

Haledon, Passaic, Co., N. J., July 15, 1881.

BASSWOOD HONEY AND SNOWDRIFTS.

The Italians I got of you are doing "just splendid." I have 52 colonies; 7 of them Italians, and one Cyprian; the rest blacks. I never saw such a flood of basswood honey as we are having this year. The branches of the trees are actually bending down under the weight of the — I was going to say honey, but will say blossoms.

I wintered 19 colonies last winter, and they all came out strong. I winter in a snowdrift. I think it is one of the best bee-houses I could find. Of course, the bees were surrounded by 4 inches of buckwheat chaff.

W. B. Cochrane and James Craft are the two great bee-masters of this locality, although James, at one time last spring, would have made a good picture for your Blasted Hopes. But he is on his "pegs" again, "chock full" of "beeology;" in fact, what Jim don't know about bees isn't worth knowing. Your A B C book is just "bully." It saved me three times the cost of it this very afternoon in finding a drone-laying queen.

WM. CAIMS.

Rockland, Sullivan Co., N. Y., July 26, 1881.

Glad to hear it, friend C.; and we are also glad to make the acquaintance of your bee-friends, Messrs. Cochrane and Craft. "How d'ye do, gentlemen? glad to see you both in a hopeful frame of mind, and on your 'pegs' again."

SWARMS SEPARATING.

I had 3 swarms of bees this spring; lost 8 last winter. I have 13 now. July 5th I had a swarm come out, and it alighted on a willow, and there was another swarm just two feet from the one that alighted on the limb between clusters; now, can you tell me the reason why they alighted so near? I hived them; one stayed, and the other swarmed again, and I hived it, and it stayed. They are doing well. One would have thought they were one swarm.

A. S. MYERS.

West Woodstock, Windham Co., Ct., July 12, 1881.

I think they were all one swarm, friend M. They often separate in that way; but the queenless one will not stay long, unless hived on a comb of brood. I should hive them separately, and then if each part had a queen, both would be saved. If one part was queenless, it could be united with the other after it had started queen-cells.

TAKING OFF SECTIONS.

I find *great* difficulty with the sections on *top* of frames. My hive holds 24 on top and 6 on each side; they get waxed to the top-bar; and when we open our hives often, the sections break when we try to lift them off. How would several wires stretched tight across the bottom of the section-case to keep them from direct contact with top-bars do? How do you manage to get the sections off that are *finished*, without breaking a great many? for mine are waxed to the tin separators and top-bars, and it is almost an impossibility to take out *part* of them and insert empty ones in their place.

We have the best honey season here I ever knew.

WM. M. YOUNG.

Nevada, Wyandot Co., O., July 16, 1881.

Your first difficulty, my friend, seems to be that you have permitted the bees access to the bottoms of the sections, which should never be. The sections should stand on a piece of wood supported about ¼ inch above the tops of the brood-combs. If you will examine our arrangements for surplus, you will find this provision always made, either in the wide frames or crate to set over the brood-nest. If you find the combs attached to tin separators, I think your section boxes are too large. These troubles usually come where beginners adopt some arrangement of their own. Our standard goods have been made with a view of remedying all these defects.

TWO QUEENS IN ONE CELL, ETC.

I began the season with three colonies; increased to seven. I have been hatching queens in lamp nursery for my own use, and have met with two rather unusual occurrences (to me at least.) First, after having one hive queenless about three days, I found they had started queen-cells on new comb that contained no brood or eggs, but had made no effort to raise a queen from young larvæ. They accepted the new queen on second trial. Second, in opening one of the queen-cells that failed to hatch, I found it contained two queens, nearly ready to hatch, having their heads in opposite directions.

CHARLES LEE.

Stonersville, Berks Co., Pa., July 15, 1881.

Bees often start queen-cells in the way you mention, but I think you would find they had eventually carried larvæ over to those cells, for they often do this.—If I am correct, you have given us the first positive proof of two queens from a single queen-cell.

MOLLIE HEATH HONEY-PLANT.

My one plant of the Mollie Heath seed I raised has been in bloom some two months. I think it will do well with me. I love to visit it early in the morning, and see my pets come and fall into the flowers and fill themselves, and then sail for home, often leaving enough for a second load. GEO. S. LEGRONE.

Lake City, Col. Co., Fla., June 4, 1881.

We have never succeeded in getting a blossom from this plant, although we had a beautiful plant growing in the garden last season. From the description above, it would seem that it bears honey like the Spider plant. Have others succeeded in getting blossoms?

A GOOD REPORT FROM VERMONT.

I started in bee culture last summer with one swarm; increased to three, and got 32 lbs. surplus. Bought one in the fall, wintered the four in cellar in Nellis Simplicity bee-hives, with plenty of top ventilation by opening the flap to quilt, but not taking the quilts off, but I had the caps off entirely. Only one was troubled with dysentery, and that a very little. In the spring I bought two in Kidder hives; transferred them in May with good success; increased the 6 to 12. I ran only 1 to extracted honey, and that a young swarm that tried to abscond; it has given 95 lbs. nice clover honey, as basswood is just in bloom. I have extracted 50 lbs. from frames that I was obliged to empty; have taken out about 50 lbs. of box honey and some 200 lbs. almost ready to come off. (Remember, I doubled my swarms.) I think the L. frame superior to all I have tried yet. I gave my young swarms a frame of brood as given in A B C, but in spite of that I had two swarms try to abscond, and would have gone as sure as fate if I had not been on hand, and the queen's wings been clipped; in fact, one went almost to the woods, and came back only because they were forced to; they had been in the hive some 48 hours; the other, only a little while; the hives were painted in April, so don't lay it to that. So, now, please alter A B C a little, and say that you have heard of their trying to abscond. Bees wintered very well right around here; but off 10 or 20 miles I hear of 50 out of every 100 perishing, and some lose all. I hope you will have better luck next winter wintering, as I think some of the A B C class have beaten you. F. M. WRIGHT.

Enosburgh, Vt., July 27, 1881.

I think I have changed it in the A B C on the point you mention; but in our own apiary it is so rare an occurrence to have bees leave unsealed brood, that we set it down as about as sure a thing as any rule with bees. Your point, that the bees wintered safely around a small point, and did not outside of this tract, would seem to indicate that it is not always all the fault of the way they were prepared for winter.

COLOR OF DRONES.

I wish to ask you in regard to the color of drones. I thought I could find my answer in back Nos. of GLEANINGS, but have been searching and failed. I have bought queens from a half-dozen or more of the most prominent importers and breeders in the U. S., including one selected tested queen from you, but have failed to raise drones the color I think they ought to be, or as yellow as my neighbor bee-keeper O. Field. They all raise nice three-banded workers, but the drones, a great part of them, you could hardly tell from the black drones. Now, how is that? Why can't I raise some nice yellow drones? Can you furnish a queen that will raise them? I have hybrid drones that show more yellow than from the pure stocks. Does a hybrid queen raise pure drones or not? I see some think they do and some think they don't. I think I have a superior strain of bees; have a number of queens whose colonies stored 200 lbs. of section honey last season, and some went over that; and as our hives are small, only about 12 inches square on the inside, and 11 inches deep, I conclude I have a pretty good strain of bees; don't you?

O. E. COON.

Le Moore, Tulare Co., Cal., July 3, 1881.

I do indeed, friend C.; and I think, if I were you, I should let the drones alone, or, at least, I would not mind what *color* they are. I believe it was pretty well agreed, long ago, that little, if any, dependence is to be placed on the color of drones. Those from Italian queens usually show some sort of a ragged yellow band; but very often, if placed side by side with common drones, there is not enough difference to be noticeable. Occasionally a queen will produce drones having a great deal of yellow on them; but I believe these are valuable only as a curiosity, and nothing more. The drones of Italy are, of course, just the same, very diverse in their markings.

TOO MUCH POLLEN.

What would you do with combs filled with pollen? I have a lot of such, and as I know they will not do to winter upon, I am at a loss. Can I get shut of the pollen by any possible process but destroying the combs? My bees gather little but pollen, and they have cramped the queens badly by it; in fact, some hives are full of pollen, so to speak. I had thought of sending for some of your one-piece sections as samples, and to have filled for our *fairs;* but I suppose you could not send many by mail, and express is unhandy for us. I would like to see some; none were ever used in this county.

H. A. Davis.

Moretz Mills, N. C , July 2, 1881.

I am not sure that I can answer the question for you, friend D.; but I would take care of the pollen, if it were my case, by getting bees enough to work it all up into brood. We rarely, if ever, have a surplus of pollen here; but for all that, our bees do not seem to winter better than other localities. If you keep them rearing brood right along through dull and dry seasons, by sugar feeding, would they not use it up in raising young bees?—Sections can be sent by mail; but as it costs about one cent each for postage it is rather expensive, unless for only a few for some particular purpose.

WASHING HIVES BEFORE PUTTING IN A SWARM.

In reply to bees leaving after swarming, most likely you washed your hives before putting them into it. I have seen hives washed, and never knew them to stay in them. If Mr. N. L. Wood washes his hives, I do not think the bees will stay in them. One of my neighbors washed a hive, and called me to help him, and the bees refused to go into it; and I asked him if he washed it, and he said he did. It is a good idea to sprinkle them with water to make them go into the hives at such times.

Claremont, Ont., Can. E. Birrell.

Friend B., it seems to me this whole business of washing is rather behind the times. I can remember when my mother used to send for some hickory leaves, with which to wash out the hive, so the bees would stay; but I do not know that I have heard of anybody doing the like since, unless it was to wash out the hive with honey and water, which would be just the thing to start robbing, if any were so disposed at the time. We hive hundreds of new swarms, divide them into several parts, set them in the sun, and do any thing we want to with them, but we always have that frame of unsealed brood we have said so much about, with every colony, no matter whether it is a handful or a half-bushel; and I have never had one so prepared go off, that I now recollect.

WHAT TO DO WITH A QUEEN AND ¼ LB. OF BEES.

I have received the queen and ¼ lb. of bees. I have had a great deal of trouble with robbers, having taken a frame of brood from one of my other hives with sealed honey at the top, and the hive I took it from carried the honey all back to their own hive. The queen is a fine one, and my neighbors say so too. C. W. Callear.

Pittston, Pa., July 31, 1881.

If you should get a queen with only ¼ lb. of bees at a time when the bees are getting so little honey they are disposed to rob, you will have to be a little careful. First procure about two combs of brood, having young bees just gnawing out of their cells. Let the bees and queen loose on these. If robbers are buzzing about, I would close the hive a few hours. Now open it so only one bee can come out at a time. If the bees cluster about the entrance and defend it from robbers, all right; but if they do not, close it again until they will. When you find them bringing in loads of pollen, you may be pretty well assured that every thing is all right. The two combs you give them should have but very little unsealed brood, or it will likely be lost.

DRONES WITH COLORED EYES.

I send you by to-day's mail a curiosity in the shape of a drone with yellow eyes, from a mismated Italian queen. J. M. Hyne.

Stewartsville, Posey Co., Ind., July 23, 1881.

I have before mentioned having a colony of bees whose drones always all of them had eyes of a cherry-red color. The one friend H. sends us as above has eyes of a beeswax yellow; in fact, it is hard to think his eyes are not lumps of bright yellow wax. Others have reported drones with white or pink eyes. From all these facts we would infer that nature seems to have a special propensity to sport on the eyes of drones. Do you not remember that friend Hasty said corn is inclined to sport in the construction of the tassel, but not in the ear? There seems to be a strange feature here, giving a glimpse, as it were, behind the curtain, of the wonderful processes by which God has builded up these wonderful creations. Many thanks, friend H., for the curiosity. As the odd-looking insect seemed lively, we introduced him to a hive in the apiary.

A QUEEN THAT STINGS WORKERS.

Queen to hand all right; bees all dead; think she must have killed them, as there was but little of the candy used. When I opened the cage she ran her sting out and frisked about as if she meant business. I introduced her the same evening as directed.

T. G. H. Jones.

Nicolaus, Cal., July 28, 1881.

We have occasionally found a queen that would pounce upon and sting workers, and I have sometimes thought if we could develop a race of queens fierce enough to make her way into any hive of bees, it might be quite a relief in introducing. I remember one friend who took the broad platform that a queen that could not take care of herself when let out among any bees, was not worth having.

BEES ON ONIONS.

Talk about bees working, you ought to see them on the onion flowers which I have out for seed. They work from daylight until dark. I do not find any flavor of onions in the honey as yet; they also work on carrots, parsley, and radish. It has been so dry that they have not worked on white clover of any account, but I have taken off a fine lot of white honey. J. H. Myers.

Saratoga Springs, N. Y., July 26, 1881.

Thanks, friend M.; it would seem, from the above, that even onions do not yield honey alike in all localities. When at Ferry's seed gardens, we found the bees quite cross, just at the close of basswood, although acres upon acres of onions were in bloom. This was much owing to their being hybrids, I presume, however. With an apiary all of pure Italians, you will usually get honey, and not stings, even if basswood has just failed.

ARE BEES TAXABLE PROPERTY, ETC.

Will you please to settle an argument between me and a lawyer? I wish to know if bees can be taxed in this or any other of the United States; and also if they are attachable for debts of any kind. Please to tell us, if you know, and oblige us both.

I have 18 colonies of bees, all black, this spring; but I have Italianized them all now. I have increased from 7, and taken 116 lbs, of extracted clover honey. While the young queens were getting to laying I sent to a firm for $3.00 worth of fdn., and he sent me 3 lbs and 2 oz. of flat-bottomed comb, 10 ft. to the pound, and very uneven at that, and the bees draw it unevenly. I think he must have made some mistake in filling my order.

A. W. MERRILL.

Parkman, Me., July 18, 1881.

I do not know law very much, friend M.; but I have always paid taxes on my bees, and always expect to, no matter what the law is. I am sure that bees are, nowadays at least, taxable property, in the true spirit of the law, and as a citizen of the United States I want to do my part toward keeping up the institutions of our country.—By all means, write to the firm you allude to and give them a chance of correcting the mistake. If they do not do it, nor give any satisfactory explanation, have them "shown up" for the good of others.

MY EXPERIENCE.

I have kept bees for four years. I went into the winter of 1880 almost discouraged with bees, having little or no success, not even paying my expenses. My bees were all packed in chaff, and so I thought were in very good condition to winter through. When April came, about half had starved, and the rest dwindled away until I reduced them to three weak swarms. Then you see I was about ready to go into Blasted Hopes. It happened that father bought enough more bees to make my number 8. I then determined to make the 8 swarms pay, if I did not get any increase. I now have about 800 lbs. of honey, mostly extracted, which I am selling for 12½ cts. per lb., and 15 swarms in the Roop hive. Some swarms I tier up three stories high. I expect my report will be small by the side of some, but it is through the blessing of the Lord I have got what I have.

L. B. KENYON.

Lyons, Ionia Co., Mich., Aug. 2, 1881.

PROMPTNESS AND RESPONSIBILITY ARE ESSENTIAL TO A BEE-KEEPER.

You no doubt begin to think that you will not get the money for the beautiful queen you sent me; but it is all right; and here let me suggest an idea that is quite a consolation to me as regards losses to a bee-culturist: If a man is so low and mean as to try to cheat one out of a queen or other appliances necessary to successful results, he is not fit to own and handle bees, and will not prosper in the business. A successful bee-keeper must be a reliable man te start with. I was very successful in introducing her, but she seemed to be quite exhausted on her arrival, and it took her more than a week to recruit, and now she is nearly double the size when first I saw her, and she has young bees now at work, and they are perfect beauties, and very industrious. I find bee culture in Nebraska quite different from that of York State or Wisconsin. The Italians are far superior to the black bees here. This is a good honey country, but bees must be strong and vigorous to stand the wind and sudden storms. I have never lost a swarm in fifteen years, and have wintered as many as 75 swarms at once.

T. L. WHITBECK.

Wahoo, Saunders Co., Neb., July 18, 1881.

CALIFORNIA.

The honey season will be a *total* failure in this section of the State this year. I have not extracted a pound of honey this season, nor do I expect to; neither have I heard of any one who has. One of my neighbors has some bees near Santa Monica; he was looking through them, a few days ago, and many of them had "not a drop" of honey in the hives. There are plenty of flowers, sage, wild buckwheat, sumac, and lovevine; but—no honey. Bees on the scales *down* to 65 lbs. "It's a foul wind that blows no one any good." I shall need no hives for another year. This is my second year, and both have been failures. Rather hard for a novice, is it not? Cause of failure of honey this year, weather too cold and cloudy.

W. W. BLISS.

Los Angeles, Cal., July 7, 1881.

UPS AND DOWNS, BUT NOT BLASTED HOPES, AFTER ALL.

I commenced bee-keeping in 1878, with two stands; increased to 5 first summer; gave 1 away, leaving 4; increased to 9 in 1879; 1 died wintering, leaving 8 in 1880; increased to 10, and now have only 3 weak swarms left. From the start they have paid expenses, and paid for $20.00 worth of carpenter tools, besides paying for hives. I have 15 extra boxes, and 100 combs, so I have not lost any thing by them so far. I have wintered in cellar every year, and I think my losses have been from my own neglect.

SAMUEL LISTER.

Newton, Jasper Co., Iowa, June 1, 1881.

STRAW OR CHAFF PACKING IN CELLAR, ETC.

Nov. 9th, 1880, I put 35 swarms into my cellar, with a bridge over all the frames, a common sheet of duck over bridge, and top of hive packed full of straw. April 13th, 1881, I set out 34 swarms, one dying queenless. After I set them out, one got robbed, and they were queenless; but I did not know it, then I put three in one hive, to try to build it up, and it is the smallest one I have now. To-day I have 57 swarms and one nucleus, all heavy except 3 or 4, and have taken up to-day very nearly 600 lbs. of honey in 1¼ and 1 lb. sections; and if I had an extractor I could take 500 more from two outside frames in each hive, and let them fill up with buckwheat, fireweed, and goldenrod.

R. P. LOVEJOY.

Greig, Lewis Co., N. Y., July 24, 1881.

CHAFF HIVES, ETC.

Bees are in splendid condition. I am surprised at the great loss of bees, especially in chaff hives. After passing through two severe winters, and never losing but one colony in the whole time, I am a firm believer that there is no better or safer way to winter bees than on summer stands in chaff hives. I have always started in winter with plenty of bees, good stores, and tucked up with division-boards. I may be wrong; but if everybody would start in winter in as good shape, and chaff packing, they would never have occasion for a space in Blasted Hopes.

D. WHITE.

New London, Ohio, May 7, 1881.

CHAFF HIVES, BLACK BEES, ETC.

I started last fall with 54 stocks—51 in Langstroth chaff hives, and 3 in box hives; lost 4 in chaff, and 1 in box hive, and doubled up one, which left 48, mostly in good condition. Increased to 83 by natural and artificial swarming; have taken 85¾ lbs. from one swarm, of nice clover honey in sections, and black bees at that. Three-fourths of the bees died in these parts last winter. My bees are doing better than ever before. I wintered in chaff hives, with a piece of carpet over the frames, and 6 inches of loose chaff on top of that, which I think is about right. I make and use the Vandervort foundation. It beats any I ever saw. I have put heavy swarms on full sheets, and have not had any break-down. I use full-size sheets in sections; 10 square feet to the pound. C. J. HAIGHT.

Rush, Susq. Co., Pa., July 11, 1881.

UPS AND DOWNS.

Bees have done remarkably well here this season. Here where, for two years past, they have scarcely made a living,—in fact, nearly all have perished, in consequence, principally, of the poor seasons,—this year they give an average of 60 to 70 lbs. of choice honey, all sealed. Italians have been about the only ones to survive the two past seasons. Three years ago in my neighborhood we numbered nearly 300 colonies. Spring found us with only 20, and all weak; 10 scarcely able to build up.

Americus, Mo., July 8, 1881. L. A. ANDERSON.

Why, friend A., that reads something like what the man said about his clock. Somebody suggested it was out of repair. "Oh, no!" he replied; "it is only because but few people understand it. You see, when it strikes 12 the hands point to half-past two; and I know then it's just half-past seven."

SOUTH AMERICA.

Please send me two sample copies of your magazine, with price lists for improved appliances, etc. I desire, through a friend in South America, to use our best endeavors to introduce this industry on a large scale there, and of course must be well informed of the requisites for such work. The field, I think, is a good one, and requires only energy and push to open up to a considerable extent. The climate is nearly similar to that of California, and I see no reason to think the project at all a doubtful one. Any information you can supply me with I shall be obliged for; and in the event of any business resulting, I shall be pleased to buy of you the necessary articles. J. H. SNYDER,

Vice-Consul Argentine Republic.

128 Pearl St., N. Y., July 23, 1881.

We gladly send the samples, friend S., and we shall be most happy to assist in any way in our power in opening up bee culture in the southern half of our continent. You will observe, from another column, that we already have one customer and correspondent in your country.

HOW TO WINTER BEES.

As wintering of bees must be a subject of much interest to you, I will send in my report for the past winter. At the beginning of winter I had 98 swarms in about 8 different kinds of hives. Three swarms starved, 2 lost their queens, and 3 getting weak in the spring, on account of having old queens (as I thought), were put in with others, lessening them 8 from 98. I could not ask for better success in wintering in any winter. I have been experimenting on wintering bees for the last five years, and I now think I know the right way to prepare them. I have a hive that cost less than $1.00 that I think would be just the thing for the timid portion of your A B C class. I could insure them to winter bees that are in reasonably good condition for 25 cts. a swarm (no patent, no hives to sell.) And if you will visit me I think it possible that you might see or hear something that would be of benefit to you in wintering bees.

Swarming commenced early in June; over 100 swarms issued. I have been selling new swarms that weighed 6 to 8 lbs. for $3.00. They have stored a good quantity of box honey. F. C. WHITE.

Euclid, Cuyahoga Co., Ohio, July 16, 1881.

Well, isn't that a little cool, friend W., to tell us you have got the great secret, and then keep us all waiting until I can pay you a visit? Can't you give us at least a brief outline of what is to be done? I will try to come and see you, however, before a great while.

HONEY-DEW.

We have not had a very large flow of honey this season, though the season seems favorable, and was early in the spring. We had lots of honey-dew for several weeks, but I did not see a single bee gathering it, or paying any attention to it. Please tell us if such cases are common, where bees remain poor while honey-dew drops from the leaves in rich abundance. S. L. GREER.

Friendsville, Blount Co., Tenn., July 26, 1881.

I never heard of such a case before, friend G. Was the honey-dew good? It must have been of very bad quality indeed if the bees would not eat it.

EXPERIENCE OF ONE OF THE "AWKWARD SQUAD."

The queen I got of you was well received and introduced, and a week after was laying all right, but in two weeks more was gone, and a lot of queen-cells capped. What became of her? I had a large box hive in the spring so full of crooked comb and honey that I did not like to transfer it, so I took off the top and put on a Simplicity hive. They soon filled it with brood and honey, sent off a swarm of at least half a bushel of bees, and still seem to be full of both bees and brood. What shall I do with them? I see in GLEANINGS how friend Miller uses honey to prevent foundation from sticking to the lever of his fastener. I put a piece of paper on top of the foundation. This can be pulled off without trouble after it is fastened, and makes no daubing of honey. To fasten foundation in the L. frame, lay the sheet of it on the comb-guide; take a hot iron (a stove-lid lifter will do), and draw it along the upper edge so it will touch both the wood and the edge of the fdn., and it is done. ONE OF THE A B C CLASS.

Bedford, Westchester Co., N. Y., July 25, 1881.

It is hard to guess what became of your queen. Any queen is liable to be found missing at any time. I presume they die occasionally of other ailments than old age, in common with the rest of mortals.—Take off your Simplicity hive, and set it on the stand of the old one now, and I think you will have all the bees and nearly all the brood, so you can just work up the old crooked combs into wax.—Your plan of using a piece of paper, friend, is novel; but it seems to me it would take too much time, the way our girls work. The hot-iron plan is a very old one, but is still used by some.

HOW TO MAKE A WAX-EXTRACTOR FOR TEN CENTS.

Take your wife's dish-pan, and cut a piece of wire cloth a little larger than the top; bend it down a couple of inches inside, and bend the corners down outside to keep it in place; put a little water in the pan, and cover the wire cloth with old combs; set in the oven with a moderate fire, and let it bake about 15 minutes, and the wax will all be on top, the water and dirt on top the wire cloth. Repeat as long as the comb holds out. Cheap and good; try it.

X. Y. Z.

Madisonville, Ham. Co., O., July 27, 1881.

Why, friend Z., yours is exactly our 30-cent wax-extractor, only you take wire cloth instead of the sieve, and steal your wife's dish-pan instead of buying one. I should not be surprised if the latter part of it cost you more than 10c of itself, unless your wife is a—jewel.

BEE-KEEPERS' MISHAPS.

As it is the fashion for bee-men to report, I must give in my mite. I am one of the A B C class. I have 6 colonies in chaff hives; they are doing finely now, but we don't know what the song will be next spring. We must hope and trust. I noticed in GLEANINGS of friend Good's report from Nappanee concerning Holy-Land bees. All very well; we don't doubt it a bit concerning the Holy-Land bees, but we are sorry about Amos Blosser's smoker burning up buggy and harness. It was bad luck, but nobody was killed after all. Friend Blosser has a new buggy and harness, and drives around as happy as a robin in June. So it's not very much worse than friend Good caging a queen on *salt*, the result of which was—a dead queen. JACOB COBLE.

South West, Elkhart Co., Ind., Aug. 4, 1881.

So it seems, friend Good, that you tried feeding your queen salt instead of sugar, and that you did not tell us about that part of it when you told about the buggy and harness.

AN A B C SCHOLAR IN TROUBLE.

Having only two box hives of black bees since last fall, I am completely at a loss what to do with them, although I have read your A B C and GLEANINGS ever since. I wintered them in my cellar; one has come out all right, and the other had dysentery, and was very weak, I being obliged to feed them. A friend of mine has lost 14 out of 22, cellar wintering. I took them out on the 13th of April. They have been working since, and I have been expecting to see them swarming every day since July, as they were hanging in front of the hive; but they have not swarmed yet. I was surprised to see them starting foundation outside of the hive. I did not like to force them to go in, as they seem very strong. I suppose it is too late to swarm now. I have sown some Spider and Simpson honey-plants; they are about 15 inches high. P. A. BOURGET.

Lauzon, Canada, Aug., 1881.

Why, friend B., did you not transfer your bees? I fear you have read A B C and GLEANINGS to little purpose, if you expected to prosper in bee culture with your bees still remaining in box hives. Spider and Simpson plants! Why, your bees have their hives so full of honey already, from the plants that grow of themselves, that they probably could not get inside if they would. No wonder they are "starting foundations" on the outside of the hives. Perhaps it may be as well now to let them remain until next spring before transferring, but you have lost one year.

A NOVELTY IN "CHAFF HIVES," AND ABUNDANT VENTILATION FOR WINTER.

I send you the following, which I cut out of one of our county papers. It illustrates a freak of the bees, to say the least; and they are not supposed to be the "Apis dorsata" either. I. D. PIERCE.

Kirksville, Mo., Aug. 8, 1881.

About four or five weeks ago Mr. J. J. Shott hived a swarm of bees. The next, the bees left the hive and Mr. Shott supposed they had gone entirely. Last Saturday he discovered the truants about 15 ft. from the tree, where they had drawn the tall grass together and were working very industriously. They evidently meant to make a home in their strange quarters, for they had stored about 15 lbs. of excellent honey, the combs of which were attached to the weeds and grass.

Mr. Shott has left them in their chosen home; he says he will not be responsible for any debts contracted by said bees, as they have left his care, and entered life upon their own responsibility.

Tell the A B C class, in order to get rid of the pollen in the fall, feed the bees after they are done storing till they use it up, then they will have a nice lot of young bees, and no pollen to cause dysentery.

A NICE WATERING-PLACE FOR BEES,

this hot August weather, is to place a keg, with one head out, in some suitable place, filled with water, and cotton cloths folded, with one end in the water, and the other hanging out. We have ours close by the well, and when we are drinking, throw what remains in the keg. The cloths keep soaked, and the bees have the nicest place for getting water I ever saw. ILA MISHENER.

Low Banks, Ont., Can., Aug. 13, 1881.

Started to winter six swarms; lost three; increased this summer to eleven; got 300 lbs. extracted honey, and expect to get more this season. Inclosed you will find one dollar. Send along GLEANINGS.

J. GOULD.

Woodstock, Ontario, Can., July 22, 1881.

Why, friend G., if you were in Blasted Hopes, it does not seem to me you stayed there long. I should think you belonged in Smilery now.

TEN THOUSAND POUNDS OF HONEY, ETC.

I inclose you draft for $14.00, for which please send me 200 of those two-quart tin pails, to which you call attention in August GLEANINGS. If they are all gone, please indorse the draft to my order, and return it. Ship by freight to me at Levanna, N. Y.

I have taken about 10,000 lbs. of honey, instead of 7000, as I wrote you a few days ago, and could have taken a few hundred more, but it began to be colored by buckwheat. I think this is a pretty good yield for 78 swarms in the spring (many of them weak), to say nothing of the 130 new swarms.

I am one of Burch's victims. I sent to him in May for one best tested queen, $3.50; in a nucleus, $2.50; and a B. & H. honey-knife, $1.25. Total $7.25. In case he does not return the money, I will not receive it from you, as I do not think you ought to pay it. My loss would have been much greater, but I live within about 25 miles of Mr. Doolittle, and so when I got ready to use some brood for queen-rearing I went to him and bought some. I also made another trip later. In this way I succeeded in raising about 70 very nice queens. F. B. Chapman.

Scipioville, Cay. Co., N. Y., Aug. 4, 1881.

Our friends will notice, from the way in which the above order is given. that friend C. feels a little sore. He does not relish the idea of sending for pails, and then having to wait until they can be made, or ordered from New York. There is a good moral there, and I don't blame him a bit; I like to get orders in just that way. When one has 10,000 lbs. of honey on his hands, he doesn't want any bothers or delays if it can be avoided.

I am very much obliged indeed, friend C., for your kind words and kind offer, but I trust Mr. Burch is going to fix up all his matters so nobody will lose. I heartily commend the neighborly way in which you and friend Doolittle help each other.

CYPRIANS FOR INCREASE.

The North-Eastern Bee Association of Maine met at Grange Hall, Dexter, Aug. 11, 1881. Three counties were represented, and from all localities it appeared that bees had done unusually well. President Additon reported one swarm of Cyprians that had increased, by natural swarming, to twelve. Mr. Crocker, of St. Albans, had a swarm of Cyprians that sent out ten swarms. Nearly all of the bees here are blacks and hybrids. The hybrids are spoken highly of as honey-gatherers. The next meeting will be held at Grange Hall, Nov. 10, 1881. The topics for discussion will be, "The different Races of Bees," Wm. Hoyt; "How to Manage Bees for Box Honey," L. French; "Are Natural Queens better than Artificial?" S. R. Bodge.

Ripley, Me., Aug. 13, 1881. Wm. Hoyt, Sec.

PEET CAGE.

The two queens came Friday the 5th; were put into hives Saturday, and Monday I went to let them go, and one had eaten through; the other had crawled under the side of the cage, so they were both at liberty, and seemed perfectly at home. The tin points don't hold the cage firmly; it would be better to have two on each side, then they would hold both corners up to the comb alike. The slide should work more easily, and in shipping, put in a small tack to keep from falling out. Every thing is drying up. Mercury up to 107° in shade. Wm. Browney.

Garden Grove, Iowa, Aug. 9, 1881.

Our queens very often get out themselves, but as they are seldom killed, we think it don't matter much. There is hardly room on the cage for four tins, and as we now make them long enough so the points can be bent, or clinched over, the cage seldom gets loose. Draw the slide out as far as you can before putting it on the comb, and you can then get it out easily. We try to make them all work easily, but sometimes the shrinkage of the wood, or a little candy on the tin, will make them start hard. I think queens have been introduced this past season with less loss than ever a season before. Thanks to friends Peet and Nellis.

LARGE SWARMS.

I can't resist the temptation to add a few lines to my already too long letter. Since writing it I have been reading in the Aug. No. of Gleanings, which I received yesterday, where you say that the largest natural swarm that you bought last year weighed 7 lbs., and that you had this year bought one that weighed 11¾ lbs. I had one the 14th of June that weighed 7½ lbs., and I thought, as I laid down my book and started for the harvest field, "If my big box hive had only swarmed, perhaps I should have had a still larger one." I had had time to bind only 3 doz. bundles of grain when I heard my farm-bell ring. I said, "That surely means visitors, for my bees got through swarming a month ago." I hurried to the house to see what was the matter. *The big box hive had swarmed!* I have just succeeded in crowding them into a good large frame hive. The bees alone just balance 11 lbs. on my Fairbanks scales, so I am only 12 ounces behind your neighbor Clark. I am *pretty* well satisfied. I have often been advised to double my late swarms. By "doubling," I mean putting two or three together; but I don't believe this one needs doubling.

My neighbor Arnold had a big swarm, also, to-day. He thinks it was as large, or larger, than mine, but could not or did not stop to weigh it. The bees clustered in four places, and he thinks they had 4 queens. He had only one hive ready when his grain was fit to draw in, so he put them all together, shut the hive up tight, or nearly so, and put them in his cellar, when he thought he would keep them safe till they killed off their surplus queens. Early this evening he opened the hive and found dead bees 4 inches deep on the bottom-board. He thinks there may be enough alive still to make a good colony. Do you think that if they had more than one queen they would have killed all but one, and afterward been all right if he had given them more air? J. W. Harkness.

Keeseville, Essex Co., N. Y., Aug. 5, 1881.

Yes, sir; but I am quite sure they had but one queen.

VENTILATION IN WINTER.

As the veterans, young and old, are pointing in the rear to the lamp of experience which may serve as a guide in the future, I beg to put in my infinitesimal. Years ago, when I had bees in box hives, I *inverted* them in their cellar winter-quarters, piling one above another. They wintered well with a loss of about two per cent. When we moved into Langstroth hives we left open the holes in old honey-boards, and placed strips of shingles half-inch wide between hives so as not to close these holes in honey-board. The winter loss was about two per cent. Last winter my bees were put in cellar without this precaution! We had 90 stands in each of the two cellars. Dysentery commenced in the best stands early in winter, and after raking out dead bees in wet, offensive masses, for several weeks, I took off honey-boards, shoving them forward about 2 inches, and then repiled the hives. *This soon ended the dysentery.* Bee-bread may have excited the disease, but ventilation ended it with me. Jesse Oren.

La Porte City, Black Hawk Co., Iowa, Aug. 5, 1881.

SPIDER PLANTS AND HUMMING-BIRDS.

I like the Spider plant very much, with those big drops of honey, but I don't get to see them very often, except when I cover them up. I got about 300 to grow from the one package of seed I got from you. But I don't like the humming-bird you sent with them; they come by the thousands, just at sunset, and take the last drop of honey, and then come to my bee-feeders like a little swarm of bees, and alight on them and sip up all of the sugar. I will have to quit feeding at the entrance, and feed inside of the hive. I would send you a couple of the insects if I did not think you sent them. I wish, while you were making me a present, that you had sent me a nice Italian queen. I would have liked it much better. You may think this is a big tale to tell; but, sir, I never saw the like in all my life, nor anybody else in my neighborhood.

Can you tell me how to make sugar out of cane?

GEORGE THORN.

Willmoths, Barbour Co., W. Va., Aug. 15, 1881.

I have seen the humming-birds too, friend T., but not in such numbers as you mention. In the night time we also have great moths that greedily suck up the precious nectar. Where these honey-plants are raised on a large scale, these bird and insect enemies might get to be quite a drawback. Probably the humming-birds were attracted from quite a distance, and that is why you found so many of them. Can you not trap them, and sell them as curiosities, and make a speculation out of them?

In our book list, you will find a book that tells all about making sugar from Early Amber and other canes.

EXTRACTED HONEY SOURING.

I have two barrels of honey that were gathered during a rainy spell, that, as soon as disturbed, commence to ferment. I am afraid to ship them, as I fear they will burst. What would you advise me to do with them? Is there nothing that I can put into them to stop fermentation, that will not injure the honey?

W. S. HART.

New Smyrna, Volusia Co., Fla , Aug. 16, 1881.

If the honey has not got so as to taste bad, which I think likely it has not, you can ripen it by putting it in open vessels covered with cheese cloth. It is very likely that the fermentation is only in the thin honey that has risen to the top. Very often it will be found all right, after dipping off the surface. The honey that tastes a little bad, or slightly sour, can be improved, and the fermentation stopped, by slightly scalding; but it is seldom of as fine a color or flavor after scalding. I would by no means put anything into it. It is because of just such work as you have now on hand, that I have in the A B C cautioned so much about extracting the honey before it was nearly all capped over.

HUNGARIAN BEES, ETC.

You ask where I got the Hungarian bees. I imported them 3 years ago. I do not think much of them as a race, but their good qualities consist in the crossing. As a race they will swarm themselves to death. I have no such trouble when they are crossed with other races. I am now testing the Holy-Land queens for laying. I have some that are very prolific, very handsome, and as large as any Italians I ever saw. Generally, queens of this race are small and not very handsome. I have selected, for breeding queens, some very fine Hungarian queens, and I expect to raise some very bright ones, thus breeding up a race of bees that will go ahead of all others.

H. ALLEY.

Wenham, Mass., Aug. 19, 1881.

Notes and Queries.

G. W. MARSHALL, DAVENPORT, IOWA.

I DREW on G. W. Marshall for the pay for his advertisement, and he repudiated it, and we drop his card; and if any one has lost money by reason of *his ad.* in our journal, we are ready to make it good.

E. M. HARRISON.

Lebanon, Laclede Co., Mo., Aug. 15, 1881.

[That is business, friend Harrison, and here is our hand on it. Let us suffer long, and be kind; but when a man repudiates his honest debts, he should be held up at once, as a warning.]

Some of the old veterans had better look out for their laurels in the queen business this year; and honey too.

L. W. VANKIRK.

Washington, Pa., Aug. 1, 1881.

I put 54 swarms in cellar; took out about 30, which died to about 12, worth, may be, 5 good swarms.

H. B. ALGER.

Edgewood, Clayton Co., Ia., July 5, 1881.

I had 130 stands of bees when last winter set in, and saved only 13. I have had 3 swarms this season. Total, 16.

H. W. WHITE.

Broad Run Sta., Fauquier Co., Va.

I have had a splendid flow of honey. I extracted 1700 lbs. from 20 colonies from July 4th to the 20th. I never saw basswood so full.

W. S. SALTFORD.

Po'keepsie, N. Y., July 29, 1881.

I have taken 1460 lbs. of honey from 49 hives, one-third sections, two-thirds extracted, all very light-colored, and fine flavored.

STACY PETTIT.

Ft. Smith, Ark., Aug. 1, 1881.

This neighborhood will have to report another poor crop of clover honey. I received more locust honey in 5 days than clover honey in as many weeks.

Cincinnati, O., July 11, 1881. CHAS. F. MUTH.

Prospects of honey are good. Extracted so far 2000 lbs., and taken off 200 lbs. comb honey. Have now 250 colonies.

O. W. BLANTON.

Greenville, Wash. Co., Miss., June 3, 1881.

I went into winter-quarters with 15 colonies; all came through right. I now have 37 colonies, all doing well. I wintered on summer stands.

THOMAS H. JANSEN.

Breesport, Chemung Co., N. Y., Aug. 17, 1881.

"Her Majesty" arrived yesterday in good condition, and coronal services were at once performed; and, there being no Nihilists, a quiet and peaceful reign is expected.

A. W. HEMPLEMAN.

Richmond, Ind., Aug. 18, 1881.

HONEY IN AUGUST.

I never knew, for the last fifteen years, the bees to gather any honey in this month till this year, notwithstanding the protracted drought. The early blossoming of smartweed may perhaps account for the same.

A. X. ILLINSKI.

East St. Louis, St. Clair Co., Ill., Aug. 18, 1881.

AN APIARY OF 225 COLONIES IN BOX HIVES.

I am in the bee business, and have been for the last 8 years. I have an apiary at Blakeley, Baldwin Co., Ala., which is, I think, the best place for honey in the State. From 225 gums, I have, in a good honey season, turned out 6000 lbs. of capped honey; but the last three years the bees have failed and done but little. I have been using the old-fashioned box gum, but intend to try the frames.

Bromley, Ala., Aug. 6, 1881. C. F. WILLIAMS.

VERY ACCOMMODATING.

If any more queens come without any name, send them all to me. I will take care of them.
A. F. EILENBERGER.
Laddsburg, Bradford Co., Pa., June 9, 1881.

I started the season with 78 swarms, many of them weak (I lost 71 in wintering;) have increased to 210, and taken, with what is ready to take, about 7000 lbs. of extracted honey.
F. B. CHAPMAN.
Scipioville, Cayuga Co., N. Y., July 21, 1881.

I lost one swarm just by not having the A B C to tell me what to do. I should have moved it before the scouts returned and took it to the woods. I have 8 swarms (one in the woods.)
F. M. CHENEY.
South Sutton, Merrimack Co., N. H.

I see you have got our convention wrongly located. It was first voted to Berlin but was reconsidered in the presence of the Berlin delegates and carried to Pewaukee, Wis. I was secretary *pro tem.* Please correct.
H. P. SAYLES.
Hartford, Wis., Aug. 2, 1881.

ERRATUM.—Between us (the type-setter and myself) there has been a mistake made which I would like corrected. Page 348, July GLEANINGS, "180 natural swarms May 12," should read, "1881 (the present year), natural swarms May 12, which is a month earlier than 1880."
ED. LADD, JR.
Beverly, Mo., July 19, 1881.

HONEY-DEW BLACK IN COLOR.

My bees are gathering honey-dew as black as ink, and building up strong.

CHAFF PACKING.

The weakest colony I have was *not* packed for winter. The strongest I have was packed in a chaff hive, and cast a natural swarm on the 26th. Give me chaff hives for such a winter as the last in this latitude.
JAS. A. NELSON.
Wyandotte, Kan., May 30, 1881.

CELLARS, OR OUTDOOR PACKING.

I wintered 22 swarms of bees last winter, 13 in cellar, and 9 out of doors, packed in boxes and stuffed with meadow hay. All wintered, until, in April, 4 died without stores. I can not tell which are the best on an average, those wintered in the cellar, or those out of doors. They are gathering honey well at this time.
L. E. BEMIS.
Athol, Worcester Co., Mass., June 3, 1881.

TRANSFERRING IN JULY; HOW IT WORKS IF YOU DON'T LOOK OUT.

After I received the queens, I had two box hives that I purchased, and concluded to transfer one of them and capture the old queen, and release the Italian; but the robbers poured in, and killed queen, workers, and all; so, you see, nobody is to blame but myself.
W. E. SHERREY.
Olmstead, Logan Co., Ky., Aug. 1, 1881.

DAILY YIELD FROM BASSWOOD.

Seeing that some were reporting how much honey a single swarm of bees had brought in in a day, I thought I would report too. I had a swarm so I could weigh them this year. July 4th they gained 13¼ lbs.; July 5th, 13¾ lbs., and July 6th, 11¼ lbs., making 38¼ lbs. in three days. That is about as well as I have seen any report of bees doing in this part of Michigan. They were at work on basswood. Bees are doing well here now on buckwheat.
T. P. BUTCHER.
Spring Arbor, Mich., Aug. 14, 1881.

[Do you wonder I planted a basswood orchard, friend B.?]

We commenced the season proper with 123 colonies (that is, after we had done selling). We have now 226, all full of bees but 3 or 4, and on the 12th and 13th we went over the whole and took out all the frames, the sections in which were all filled out, and no others; and we took off 276 one-pound sections, well filled; all clover honey, and nearly every colony has commenced in the second story. How is that for July 12?
Mauston, Wis., July 15, 1881.
H. V. TRAIN.

CALIFORNIA.

We will have but little honey this season—one-fifth of a crop. I served an apprenticeship of three years with Mr. J. S. Harbison, and have an apiary of about 200 stands of bees now on my own account, but find I will have to connect the bee business with fruit and vines, as the honey crop is uncertain. I have just got out 1000 raisin grapes, 100 orange-trees, and 100 olives.
J. P. M. RAINBOW.
Fall Brook, San Diego Co., Cal., July 18, 1881.

SAVAGE BEES.

Please inform me what I can do with the most savage bees that ever lived. My hand is so swollen from their effects that I can scarcely write. Please do give information.
MRS. WM. PATE.
Atwood, Antrim Co., Mich.

[If it is a sudden freak of theirs to be savage, it is probably because the honey yield has suddenly stopped. In that case, feed them liberally and regularly, and I think they will turn out decent and civil bees again. If they are always cross, kill the queen or sell her to somebody who don't mind cross bees, telling him, of course, exactly why you sell her. You can by this means secure bees just as gentle as you choose, in every hive in your apiary; Do you keep a good smoker, and never let your bees have the upper hand? It is a very bad plan to let your bees get the habit of stinging. It is like letting a high-mettled horse get loose and run away a few times.]

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

I REGISTERED N. C. Mitchell an order of $16.00 for five nucleus swarms in February, 1880, and was to have the bees by the 10th of May. He went to Smithfield, and said that he couldn't make shipping arrangements to me to suit, and that he would send me two queens for each nucleus ordered, and if I lost any in introducing, that he would make them good. Now, in the first place I ordered five nuclei with *tested* queens. He mailed 15 queens; one came through dead; 4 I lost in introducing, which leaves 10. All proved hybrids. Fourteen, at 50 cts. each, would make $7.00; that would leave $9.00 in my favor, or that I have not got any thing for. Now, I want you to give him a show in your Humbug column. **H. DICKSON.**

West Lima, Richland Co., Wis., July 18, 1881.

Why, friend D., if you got fifteen hybrid queens for the $16.00, I should say you had done "amazing" well compared with what others have had. I really can not understand why Mitchell should single you from all the rest and send you *any* thing. Any way, I am very glad indeed to know that he has some especial friends to whom he sometimes sends even hybrid queens for their money. If yours were the only complaint, I should by no means think of putting him in Humbugs and Swindles at all.

The "Smilery."

This department was suggested by one of the clerks, as an opposition to the Growlery. I think I shall venture to give names in full here.

THREE swarms on a limb all at once, and more coming. Bees are doing finely now; I have 92 strong (breech-loaders;) don't get time to eat my dinner in good shape. The cry is, more sections; foundation and chaff hives almost all gone, and bees just piling in the clover honey. It makes me almost feel ashamed to take off 21 nice sections all capped, and so nice, from one hive; but I will try to endure it. **D. G. WEBSTER.**

Blaine, Boone Co., Ill., July, 1881.

I went into winter-quarters with 20 swarms only; lost one, dysentery; flying colors, heads up, tails sharp, honey flowing. Likely to get 4000 lbs., specific gravity 140 degrees by hydrometer, rain water being 100. Thus it is 40 per cent heavier than water. Queen business brisk. A new shop, engine, and 2 acres of Early Amber cane, "heads up."

H. SMITH.

New Hamburg, Ont., Can., July 25, 1881.

Bee Botany,

OR HONEY PLANTS TO BE NAMED.

PLEASE name the inclosed plant. It would not be of any special importance if it were not for the fact, that it yields honey during July, when there is almost nothing else. It furnishes honey all day, wet or dry. It grows from 12 to 18 inches high, and is found mostly on the unbroken prairies. **C. B. THWING.**

Hamilton, Mo., July 14, 1881.

Answer by Prof. Beal:—

The plant is *Pycnanthemum Linifolium.* It is a sort of wild basil. They belong to the mint family.

Michigan Agricultural College. **W. J. BEAL.**

Inclosed is the specimen spoken of in my letter of yesterday, and which I forgot to put into said letter.

M. J. HARRIS.

Calhoun, Richland Co., Ill., July 23, 1881.

The plant looks to us very much like pennyroyal, and it also tastes very much like it, only it has a little more of a sort of camphor flavor. Friend Beal, however, doesn't call it pennyroyal at all, as you see above:—

This is *Pycnanthemum pilosum*, a species of basil, or mountain mint, of which there are over a dozen east of the Mississippi River, and all good bee-plants. Several others have been sent me at different times by bee-men. **PROF. W. J. BEAL.**

Lansing, Mich., July, 1881.

I mail you some honey-plants. Please give the name of each, and oblige. The honey-harvest is over with us, and I am ready to ship bees at 75 cts. per lb. The little fellows have done me good service this season—120 sections from one hive; the others averaged 80 each. **CHAS. KINGSLEY.**

Greeneville, Tenn., July 7, 1881.

Answer by Prof. Beal:

No. 1 is *Asclepias tuberosa*, a beautiful species, with flowers varying from dark orange to light lemon color. It is well worth cultivating for ornament. No. 2 is *Plantago lanceolata*, ribbed grass, a common weed introduced into lawns with grass seed from the east. **W. J. BEAL.**

Agricultural College, Lansing, Mich.

HERCULES' CLUB.

Find inclosed blossom and leaves of a honey-producing shrub which I saw for the first time yesterday. The gentleman at whose place I found it, Mr. Chris. Ruggles, Ashland Co., O., knew no name for it; says it remains some time in bloom, and is "alive with bees all day long." It puts out one stem of blossoms the first year, and increases each year until it reaches 20 or 30 feet in height, when it dies and others take its place from the root; does not sprout badly from root, but is reproduced in that way very easily. These blossoms bear berries, which he says resemble "spignet;" also resemble comfrey berries. It smells very sweetly, and when I saw it (about noon) was covered with bees, which he said were kept a mile from the place. Do you know the name, and is it of value as a honey-producer? Please answer through GLEANINGS. These blossoms are all grown upon this year's growth of stalk, which looks like the stalk of common elder.

H. W. MINNS.

New London, Ohio, Aug. 1, 1881.

I thought the plant seemed familiar, but could not locate it, until friend Beal named it as below.

This is Hercules' Club, Angelica-tree (*Aralia spinosa*), a shrub found from Ohio to Florida, also in cultivation. **PROF. W. J. BEAL.**

We have a few of the trees growing in our town, and every year they call forth exclamations, when in bloom, from the great swarm of bees constantly hovering over them. I will at once take steps to have some of the trees on our grounds.

Bee Entomology.

Or Enemies of Bees Among Insect Tribes.

I SEND you to-day by mail an insect that destroys bees. They catch the bee and insert their bill in his body. I caught this one with a bee, and "waxed" it. What is it? **E. M. WALLACE.**

Wheatland, Ind., Aug. 2, 1881.

It is the celebrated Asilus Missouriensis, mentioned in A B C and Cook's *Manual.*

TOBACCO COLUMN.

I HAVE not made use of the weed since I observed your offer. Now, if you will send me the smoker I will be very much obliged; though, smoker or no smoker, with God's help I never expect to use the weed again. I am an orphan boy, having no home of my own. I live with my cousin. I have saved a few dollars, and am trying to start bee-keeping. Last year I bought me one stand of blacks; did not know there was any other sort of bees until I chanced to get a copy of GLEANINGS this spring. I bought a nucleus of J. P. H. Brown, Augusta, Ga. They have built up to a strong colony. I want to buy more as soon as I can get the money. W. H. T. COLLINS.

Ayersville, Ga., June 5, 1881.

You are on the right track, friend C., in declaring you will stop. Hold on, and you will certainly, with God's help, come out all right *any way*.

I am an old smoker; will try to quit. Send smoker, and I will either pay for it or quit smoking.

Kelloggsville, O., July 15, 1881. J. SHAVE.

You will perhaps recognize me as one of the free-smoker club. I would say, that I am still sound on it, and bound to win. E. A. EMMONS.

Tampico, Whitesides Co., Ill., July 4, 1881.

If you are going to give all of your subscribers that smoke tobacco a smoker provided they will quit smoking, you may put me down for one.

Neosho, Mo., July 5, 1881. R. P. LILES.

I see your smoker offer in GLEANINGS. I think I must take the advantage of it, so I agree to quit the use of tobacco from this date, if the Lord will be my helper, and use it no more. So send to me a good smoker. W. C. WITT.

Gordon, Wilkinson Co., Ga., July 15, 1881.

I have been reading the Tobacco Column in GLEANINGS with interest ever since it was originated. Now you may put *me* there. I have used tobacco for 25 years and now I have quit for 25 days, and I think I can fight it through; so you may send me a smoker if it pleases you to do so — one like you show on page 322, July GLEANINGS. I have a small Bingham, but it is very inconvenient to light, and too small. I am in the same boat with friend Cook, on page 358, July No. J. H. EBY.

North Robinson, Crawford Co., O., July 28, 1881.

The smoker is received, and is O. K. You say, in GLEANINGS, that you think my case a rather bad one. I gave my pipe and tobacco to my wife, and told her to burn them in the stove; also, $1.50 to send you the first time I was caught smoking.

D. S. BURBANK.

Reinbeck, Iowa, August 6, 1881.

I beg pardon, friend B. I know you will keep your promise. But it seemed a little as if you meant you would keep on with the pipe unless I sent you a smoker, and I should feel, perhaps, that I was making a mistake if you did that.

I see you are having quite an expensive thing of your tobacco and whisky and swearing matters. I hope you will accomplish good by it. But another idea: I am in my 67th year; have never smoked a cigar or a pipe in my life; have not taken a dram of liquor of any kind for more than 50 years; never swore in my life, only when two or three years old, and that in "Dutch." Now, sir, would I not be entitled to a smoker, say a Clark breach-loader,— "jest?" I intended twitting you about sleeping in church, but will let it pass for the present.

PHILLIP EARHART.

Davenport, Scott Co., Iowa, July 30, 1881.

Please send me one of your cold-blast Simplicity smokers. I propose never to use any more tobacco, but I don't propose to take a smoker for that. Am doing nicely (I think) with my bees so far.

DR. GEORGE A. DEMING.

Amboy, Lee Co., Ill., Aug. 1, 1881.

May the Lord bless you in the determination, friend D. When the doctors of our land shall, as a class, discontinue tobacco, we may with propriety expect their patients to do the same.

I have one of your Simplicity smokers, used three years, and it is good yet. You can put me on your list of reformed tobacco-users. I have used it for 26 years, but have quit for the last three months and forever. DR. C. E. BULISON.

Flushing, Gen. Co., Mich., July 26, 1881.

Well, that is a good report, friend B. We would like to send you a smoker free, just to kind of remind you that you have shut down on tobacco for good and all. Can we not do so, doctor? If we can get the doctors all to "eschewing" tobacco, we shall be ready to commence with the lawyers next. Eh?

Come to think of it, I quit using tobacco 5 weeks last Sunday; have been using it for 17 years, sometimes using as much as 10 cents' worth a day. Now, it seems to me I ought to send you a smoker for fair play, as it has already saved me more than two smokers would cost, and you have, through your agency of offering a smoker, caused me to try to quit the use of it, and I am happy to say I have succeeded, and hope to continue to do so; but since it is your rule to send a smoker to all who quit the use of tobacco, I suppose you had better put me down as one who will take the smoker as a pledge not to use any more tobacco. ROBERT M. TEATS.

Globe Mills, Snyder Co., Pa., July 27, 1881.

Seeing your offer of a smoker to all who would quit the use of tobacco, I have concluded to say, I have one more cigar, and when that is gone I'll agree to the contract for a smoker.

J. H. LEE.

Lake Jessup, Orange Co., Fla., July 18, 1881.

I am glad to have you give it up this way, rather than not at all, friend L.; but I think your plan a little dangerous. As soon as you are satisfied a thing is wrong, stop it that instant; for every moment you procrastinate, is dallying with sin; and any such course weakens one's powers of self-control to a greater or less extent. If it were a point as to whether you would or would not become a Christian, a still worse danger would be in the way, for you may never live until that last cigar is smoked, and you be summoned to meet your Maker with a deliberate purpose to sin still held in your heart. Do you remember how Christ put it? If thy right hand offend thee, cut it off and cast it from thee.

Our Homes.

He that doeth righteousness, is righteous.—
I. JOHN 3:7.

VERY simple and easy, is it not, friends? To be sure, he that doeth righteousness, is righteous. What should call forth any such asseveration, and why should anyone think of disputing such a self-evident proposition? Well, you know I said considerable last month in regard to the importance of not only attending church, but of uniting yourself with the nearest Christian congregation. Now, I by no means meant that the simple fact of your attending church, or even uniting with a Christian congregation, was going to make you a Christian. If you are at all consistent and honest, it would surely have a strong tendency toward better lives, but the uniting with a church should certainly be rather the effect of some thing behind it. Suppose a man, after having wronged a neighbor in a bargain, should say to himself, "Well, that was almost too bad, I declare. I think, to make up for it, I will go to prayer-meeting this afternoon, and take a part, and help the meeting along, the best I know how." What would you think of such a fashion of religion? What do you suppose the wronged neighbor might think of it, if he were present?

In one of my letters a few days ago, the following occurred:—

My neighbor, just across the street, is a professing Christian also. This man was requested to resign membership with our little Schoolhouse Methodist Church, and save expulsion. It was alleged, that he had been compelled to settle for timber cut on land belonging to other parties. He has been at camp meeting for the last three days, and we all join in the wish that his good wife expressed in the words, "I hope he will return home a better man."

Now, if the effect of the three days at camp meeting is to make him come out before the people and confess his sin fully, without trying to soften or screen himself, everybody, skeptics and church-members, would pronounce the camp meeting a great institution; but if he only went there and exhorted other people to give up their sins, or talked excellently without following it up with actions, the world's people would have little faith in camp meetings, and very likely little disposition to look into the matter to see whether it was a good thing or not. They would have very much more charity for the man if he made good his delinquencies by honest, square day's work during week days, and then passed the Sabbath in the way indicated by the Bible. I by no means wish to say that camp meetings are necessarily out of the way, but it does seem to me that those who go should be very sure that they have the time to spare, without making any brother feel that they would serve the cause of Christ more by attending faithfully to their week-day work. There are times when I should feel that I had no kind of a right to go to a camp meeting, and my conscience would censure me as sorely from being away from the post of duty, where God has placed me, as it would if I were taking money, instead of time, that was not my own. I like religious zeal and enthusiasm when it takes the shape of straightening up crookedness in one's past life.

Behold, to obey is better than sacrifice.

Humanity is very much the same now that it was when Samuel spoke the above words to Saul, and men find it very much easier to run off into some kind of a semblance of a zeal for righteousness, than to take up the stern hard work of that kind of righteousness which means going right to work to make wrong things right.

Now, there are different opinions in regard to right and wrong, and people's ideas of what a Christian ought and ought not to do vary greatly. To illustrate this, I will give an extract from another letter, recently at hand:—

When my wife says you must be a Christian, I look at her and dare not say a word; but I think what inconsistency you display in the Aug. No., as on pages 391 and 382, about Mitchell; and on page 407 you talk again in his favor. Can a man slander another as you do, and be pure in heart? What is the use, any way, to publish Humbugs and Swindles about Mitchell? We all have our faults. J. D.

As our friend sees it, I have slandered Mitchell by publishing letters from those who have sent him money and never got any returns. He also thinks it inconsistent because I spoke of the Mitchell hive as being pretty, and quite convenient for extracting, as used by friend Reed. I do not believe I have any ill will toward Mitchell, for I should think it a real pleasure to take him by the hand, at any time; but I should give him the severest talking-to he probably ever got, for taking people's money as he does, and continually advertising to get more. Besides the talking-to, if he did not seem inclined to give up those dishonest ways, I would use all the influence I could bring to bear, to get him shut up where he could not defraud our bee-men any more as he has in the years past. Well, how do I know that I could be a Christian in so doing, and that the friend who writes the above is wrong? We all have our faults, and what *is* the use of having a Humbug and Swindle column? My answer is, that I feel God's approving voice in the Humbug and Swindle department, very much as I do in this one, especially when I try to keep out all malice and ill will in conducting it. The feeling is still more strengthened by the approving voice of the great multitude of you, my friends, in the past years that these letters have been published. There is also a happy thought connected with it, and it is that of those who have been published for getting money in this way, all have ceased, and, so far as I know, are doing a straight business, with the exception of Mitchell. For this I can honestly say, God be praised; and while I publish letters of complaint against Mitchell, I can honestly pray that they may teach him that such acts come to light so quickly through the press, that he can not long get enough to pay his printing expenses. Friend J. D., I feel that God has called me to take up this work, and it is my prayer that, when I am gone, he may raise some one else up to do it, and that, while GLEANINGS is loved by all who "do righteousness," it may, at the same time, always be like the law, a terror to *evil-doers*.

In the two above illustrations of righteousness, the average mind would answer readily what was right and what was wrong; but I am now going to cite you to some cases where it is not so clear. I choose these plain, practical questions, because it comes right home to a great many of you, and I wish to see how nearly we can agree on many things where, at present, there are wide differences of opinion and much hard feelings, not to mention the unkind words that come now and then. As pretty much all of our readers either buy or sell queens, often both, you can all enter into the spirit of the case.

Now, Mr. R., I have some thing to say about buying queens. I commenced writing to four or five different parties for queens the first of May, seeing our bees were making ready for swarming. At last I picked up an old GLEANINGS, and looked for the star-marked names, and settled on —— ——. I wrote him, and he said he would send me six in June for $5.00. I sent him the money, and he said he would send Italians in a few days. The Cyprians he could not send yet. So in about a week after that I commenced "tending office," having three miles to travel on foot. After traveling *seventy miles* I received three queens, mailed July 19. The other three are yet to be traveled for. EDMUND ESTEY.

Clarence, Shelby Co., Mo., Aug. 10, 1881.

This is really too bad. Why, it is "awful" to travel 70 miles on foot for three dollar queens, after they have been paid for. But the worst of it is, that friend E. is not the only one who has traveled for his queens. We who sell queens, by our advertisements agree only to deliver them safely to the post-office. If they lay there a day or two, I would not like to be held responsible for them if found dead.

No wonder hard feelings come up, and that hard letters are sometimes written. Those who send the queens out, know that it is bad; but they say they do the best they can, and that it is impossible to tell just when they can be sent. One looks at it from one standpoint, and the other from another. How differently we do see things in this world! A few days ago, a young man was unpacking a dozen barrels and boxes filled with glassware. They were new goods, new patterns, at lower rates than we had ever seen any thing of the kind before, and I was so eager to see them, as they came out nice and clean, without a single one broken, that I could hardly attend to my regular duties. Well, to the young man whose duty it was to attend to this, there was no such attraction at all. It seemed to him drudgery, and when some of the hands asked to go on an excursion, the minute I gave permission he was off without even taking care of his invoice, or putting a single thing away. Why, I should have been happier in unpacking and arranging those goods nicely on the shelves, than in going to the greatest excursion that was ever gotten up. You see, we are unlike in our tastes, and look differently at things. Well, the one who sells queens, and the one who buys, are perhaps not quite so unlike in their tastes, but they see the transaction differently. What can be done to make them see alike, that they may have more charity for each other? Of course, the great obstacle in the way is selfishness, and thinking only of one's own comfort and needs, to the exclusion of others. Jesus, you know, pleased not himself; and if we can get a little of this Christ-like spirit in humanity, we have got along a great way. I would say to the brother who rears the queens, "Do not advertise, until you have quite a number of queens laying, or nearly ready to lay. It is far better to have a few ready to send out before you have applicants, than to have it the other way. Cultivate such a zeal for promptness, that you would set up half the night, leave a good hive queenless, or even sell a tested queen for a dollar one, rather than disappoint one, as you have friend E."

To friend Estey I would say, "Do not place so much dependence on getting your queens promptly; but when you send the order, start some queen-cells also, so if they do not come, you will be only a little behind. Why, the labor you expended in walking would have reared a dozen queens, at a low estimate, and almost every bee-man has at least one queen that will do very well to start cells from. If you get your queens right off, you will be agreeably disappointed." You see, we wish to—

Look not every man on his own things, but every man also on the things of others. Let this mind be in you, which was also in Christ Jesus.—PHIL. 2: 4, 5.

While each should have a broad charity for the other, let each also endeavor to do better. I would not have you, my friends, imagine I do not find a Christ-like and self-sacrificing spirit among your letters, for I do find a great deal of it; and while it cheers and lightens my pathway, it gives me faith in God, and faith in my fellow-men. Before dropping the above illustration, I wish to say, that we really ought to have some penalty agreed upon for those who are slow in filling orders. Who will put in an advertisement closing some thing like this: "I will forfeit one per cent per day, for each day the order remains unfilled after the money is placed in my hands"? If you held the order 100 days, you would have to send back the money and the goods too, which indeed you ought to do.

About going to the post-office: Do not people usually either go or send to the post-office about once a day, any way? and is it really fair, to say all these trips were made solely for the sake of the queens they expected? And, by the way, I do believe a great many of you buy far more queens than you need to. Raise your own. I do not believe so very much in extra stock. Almost every bee-keeper can raise for himself just as good queens as he can buy, and without half the bother, risk, or expense either.

I told you some time ago I did not believe in prayer as you do. I confess I do not read the Bible as much as I ought to, and I am a very poor scholar. One thing that bothers me is the preachers who are always telling how we should go, and then do not go themselves. May be this will hit you; if so, I can't help it. The most of them are too lazy to work, and want big pay. If a man preaches, let him work too. And another thing is the strife between the churches. They are all striving for one place. What will they do when they get there? The preachers keep croquet for their children to play, and the superintendent of the Sabbath school does so too. They play Sabbath afternoons. I would just as soon play cards. I don't play any of them. I try to treat all mankind as I like to be treated. I *may* become a praying man some day. Well, about the bees. You said that the bee-keepers ought all to set aside one stand and its increase for the support of the Lord's work. I have eleven stands, and have one of them set aside for that purpose. L. N. COOPER.

Tehama, Cherokee Co., Kansas.

Friend C., it does not take much education to read the Bible, enough to lead one to eternal life, and I have sometimes been led to think that an especial blessing rested on those who were compelled to study it slowly and laboriously. It is the "unrighteous" lives of the preachers that bother you, is it? Well, as I do not know those near you, I can not say but that you are right; but, my friend, whatever may be *their* faults, I am sure there is a grievous one of uncharitableness in your own heart. The ministers of our town are among the most earnest and hard-working class I know of, and it is a kind of work *you* probably could not be hired to do either. Teaching school is a wearing kind of labor, because of the responsibilities of looking after so many; but a faithful minister has the whole community on his shoulders. The dear friend who preaches to us every Sabbath, I am happy to say is an intimate friend of mine; and I know, as perhaps but few do, of some of the cares and trials he has to endure. It took him years to fit him for the place he holds, and I fear many of us forget how safely and wisely he advises us through the most perplexing and difficult phases of human life. Go and get acquainted with your ministers, friend C., and see if you do not tell me you were mistaken. And so you feel sorry to see the strife between the churches, do you? Well, here is my hand on that, and you and I will let the world see that we two, at least, are above this kind of weakness. Divide the proceeds of that hive around among them, and then let the world know you are interested in the prosperity and purity of every church in your vicinity. If God has given you a clearer perception of right and wrong than he has your neighbors, you can give them a pure upright life for an example. If your conscience tells you it is wrong to play croquet, by no means do it; but be careful how you lay down lines for the conduct of other people. If you would have that conscience become a real guide and friend in life, by all means become a praying man, and in the solitude of your closet ask God to let the voice of conscience guide you in all doubtful or difficult matters. Listen to our next friend:—

I did not expect to write you again so soon, but reading Our Homes in June GLEANINGS has brought up thoughts that I *must* try to express, as I understand you; that is, what and who is honest. I try to live by the rule, "Judge ye for yourselves if these things be so;" but as the years roll on I feel less and less competent to judge as to what is strictly right or wrong, and the only way I know is to more carefully heed "the voice of God within me;" and if the Bible doctrine of "ministering angels" be true, then on the principle that "like attracts like," the better our thoughts and actions, the better will be the angels that minister to us; for John says, "Not *all* the spirits are of God," and adds this: "Prove the spirits, and see if they be of God."

One Bible student has written, "Through infidelity, is to come an intelligent belief in the Bible," and I believe he was right; at least, in my case; not that I profess to understand the Bible, only this: once I had a "blind belief," then no belief; now I am continually finding (to me) new truths. I read the Bible just as you listen to ministers, and judge for myself; and what I can not use or understand or apply, I just leave without comment until I am able to use it. I *feel* that there is a wise over-ruling power, and that there may be ministering angels, agents of this power, who strive to help and guide us. J. H. BEMIS.

Los Angeles, Cal., July 1, 1881.

The following is from a friend who has written me letters about some points in doctrine, as nearly as I can understand:—

You object to the Bible truths I tried to impress upon your memory, in a manner pooh-poohing them as if they were of no importance; besides, you prefer the teachings that emanated from the 7-hilled city to the teachings of the Bible. The apostle declares that Jesus Christ was the minister of the circumcision, to confirm the promises of God to the fathers. Where in the Bible does it teach the existence and translation of immortal souls to transckyana at death? Oh that Root would root deep into that book, and find the hidden treasure, for he has not yet found it!

You durst not publish this in GLEANINGS.

New Hamburg, Ont., Can. H. SMITH.

Friend S., I do not know but that I am about like the boy who, when he came home dripping wet, accounted for it to his mother by saying that the boys dared him to jump into the creek, and *he* wasn't going to be dared by anybody. As your letter is not very long, it does not take up much room; but I hope you will forgive me if I say I don't even now get a glimmering of what it means, unless you allude to some thing I have heard about the sleep of the dead. Are you sure you are not in error in trying to point out to me my duty? Suppose I should take your letter along with me and read it to the boys in jail; do you think it would have the same effect in restraining them from crime that it would if I opened the Bible and read—

> He hath shewed thee, O man, what is good; and what doth the Lord require of thee, but to do justly, and to love mercy, and to walk humbly with thy God? —MICAH. 6:8.

Friend S., there are quite a number of you who complain of the way I teach here in the Home Papers, and beg space to give their own peculiar views; but do you think the Home Papers would have the hold on the hearts of the people they now have if I allowed them to be filled up with views on doctrine? See the following from away off in China:—

I want to thank you for sending me a copy of your excellent GLEANINGS. Four numbers have reached me, and have been read with increasing interest.

There are no domesticated bees in North China. There is a dark kind of strained honey, so there must be bees of some kind. I have not been able to find any honey-comb. They say that it is always dirty. When I obtain some accounts and useful information I shall be very glad to communicate with you.

I also desire to assure you of my Christian appreciation and sympathy in your wisely directed efforts to honor Christ, and proclaim his salvation in every business relation, and in all editorial work. I verily believe that you have been taught a secret which gray-haired ministers have failed to acquire: that men need to be talked with rather than preached to. May God bless you in your business with prosperity, but more abundantly bless your words and work for the advancement of his kingdom!

O. W. WILLITS.

Pekin, China, June 27, 1881.

I have tried, my friends, in my own humble way, to point to "the Lamb of God, who taketh away the sin of the world;" and after I have seen any brother or sister go to God in prayer, and to the Bible, in the time of trouble, I feel much safer about them than if they were constantly coming to me for advice. I have no fears but that God will guide them safely, and take care of them, even in points of doctrine, if they make it their rule in life to come to him. If you are striving, day by day, to be "pure in heart," you have the promise that you shall "see God," and seeing him, you shall certainly be told, if you are making any great mistake or blunder. You are plainly told again, "Whoso cometh to me, I will in no wise cast out;" therefore we need not be troubled, nor be afraid, even if all the world shall assail our Christianity, and say we "have not yet found it."

In GLEANINGS I see that you kindly answer questions from inquiring friends. I will ask a few. Do you think that it is a sin to ask God to take one out of this world of trials and troubles? Is it a sin to want to go to that heaven above, where all is peace and joy and love, to receive those great blessings which the Lord has promised to them that love and serve him, when you are so tired? I am very desirous to live a Christian life, but find it very hard to under my present circumstances. First, my husband has no such desire whatever. He will not talk on the subject; does not go to church, nor care to have me; says it is all nonsense; and as we live in the country, a good way from church, it makes it hard for me to get there, and then I get discouraged, and think if it would please the Lord to take me, how gladly I would go.

Again, my husband has been trying to pay for a farm for 20 years, and we are obliged to live very economically, denying ourselves almost every luxury of life. Our home is very inconvenient, having but two rooms and no fence around the yard, and all things in like order. My husband being one of those indifferent kind of men in regard to how he lives, thinking it expedient not to spend any money on repairs until he is out of debt, which I think sometimes will never be, that I wish I could go to a world where money is not needed. I see you have great faith in prayer; now, if you had prayed for the Lord to help you financially, and things seemed to be getting worse, would not that weaken your faith just a little? or if, on a certain Sabbath, you had asked to have a way to go to church, still, when the day came you had to stay at home? Now, we are told to ask, and we shall receive. How are we to ask, and what for? I ask an interest in your prayers. Hoping to hear from you, and that you will excuse my long letter, I remain,— X. Y. Z.

July 22, 1881.

It certainly is wrong, my friend, to wish to leave the world, one moment sooner than God's own appointed time. He, and he only, has the right to limit your span of life. These thoughts come from Satan, and they will only make you miserable and wicked by harboring them. Are they not selfish thoughts, to say the least? Are you not thinking of pleasing only yourself, when you get in these moods? Jesus, you know, pleased not himself. Have you really tried making others happy? and has it occurred to you that God wishes you to fill your appointed place in this world in doing good to others? A Christian especially, should live for the good of his fellow-men. Pardon the liberty I take, my friend; but if your life were one of real nearness to God, I can not but think that your husband would feel differently. You won him once, and I feel pretty sure that you can win him again, not only to yourself, but, what is a thousand times more important, to the Lamb of God who taketh away the sin of the world. If you do your duty, your husband ought to be converted. I should not be writing these Home Papers now, and exhorting men to cease to do evil, were it not for a woman's love and patience, when it would seem that patience had long, long ceased to be a virtue. Do you wonder I am hopeful—and thankful? Suppose your farm is not paid for, and that you are obliged to economize. For a few weeks past I have been thinking (you do not know how longingly) of a little log house back in the woods; and I do not believe I would mind being in debt for it too, if I could only have freedom from care, and relief from so many responsibilities. I, too, am tired. I want to make garden and keep bees, as the rest of you do, with my time all my own; but God says to me plainly,—

Not now, my child,—a little more rough tossing
  A little longer on the billows' foam;
A few more journeyings in the desert darkness,
  And then the sunshine of thy Father's Home!

Not now; for I have wanderers in the distance,
  And thou must call them in with patient love;
Not now, for I have sheep upon the mountains,
  And thou must follow them where'er they rove

Not now; for I have loved ones sad and weary;
  Wilt thou not cheer them with a kindly smile?
Sick ones, who need thee in their lonely sorrow;
  Wilt thou not tend them yet a little while?

Will it not be better for both you and I to—

Go with the name of Jesus, to the dying,
  And speak that Name in all its living power;
Why should thy fainting heart grow chill and weary?
  Canst thou not watch with Me one little hour?

Gospel Hymns, No. 47.

My friend, when God does not see fit to give me what I ask for, I try to see his loving hand in the very act of withholding it from me. To illustrate: I loaned one of our reformed boys some money a few months ago. I did it a good deal against my better judgment, but as the case seemed very urgent, I yielded. It did him great harm. He has agreed with me, within a few days, that it was a mistaken kindness to him, although I did it with the kindest of motives. Is it not possible that God knows that what you and I are both praying for now would in the end do us harm? I have thanked God a great many times for withholding money from me, after I could look back and see where it would have done harm. Can we not both thank him now for withholding that which he in his great wisdom sees will not be best? Children are sometimes stubborn, and refuse to be taught: shall we be of that class? My dear friend in trial, you and I both have one great precious gift that many of the world know not of. It occurs to me just now, that we might with consistency even shout for joy at the bare thought of it. Shall I tell you what it is? A little verse that I have been singing for a few weeks past, at odd times, tells it.

I am thine, O Lord, I have heard thy voice
  And it told thy love to me;
But I long to rise in the arms of faith,
  And be closer drawn to thee

"And it told thy love to me." Poor, unworthy, rebellious *me*. There is no mistaking it. We have both heard that voice, even if we do not hear it so plainly now. That love is not gone, unless we have driven it away by "unrighteousness." I want to pay all my just debts, even to the uttermost farthing (in fact, I would rather pay some things it seems to me I do not justly owe, than to make any mistake about it), and then all the rest may go. Give me that love, and all the world's possessions are as nothing to me. Still, if God wants me to hold them and wield them for the good of you all, all right. If I do not get enough kind words along the way to make me happy anyhow, I will just remember that love that was spoken "to me" away back on the night when I first told my Savior, on bended knee, that I wanted him to lead and I would follow.

AMOS I. ROOT.

In the July number of GLEANINGS appeared an article characteristic of the above personage, but not very complimentary to ourselves. It was characteristic of Mr. Root for many reasons, among the number being the falsehoods it contained, and the evident desire to injure a competitor in business. Mr. Root copied an extract from one of our advertisements, and says that it appeared in the May and June numbers of his GLEANINGS; yet the pages of this same GLEANINGS disproves the assertion. The advertisement referred to by Mr. R. was written in the month of March last, and was changed by us as soon as practicable after we had ascertained the loss of our bees. It may have been our duty to have known each day the exact condition of our bees; but as we are not accustomed to their daily manipulation during the winter season (and April was, for the most part, a winter month here), especially when located five miles from home, possibly we are excusable for not knowing, at the time, that our bees were starving to death.

Early in May we received a letter from the publisher of GLEANINGS, stating that he was informed by our neighbors that we were advertising a hardy strain of bees, when, in fact, they were all dead. In reply to our inquiry, Mr. Root admitted that he was unable to furnish the names of those parties who knew so much more about our business than we did ourselves; yet, Mr. Root had the audacity to publish this statement, which he could not verify, in July GLEANINGS.

After making several other untruthful statements regarding us and our business, Mr. Root winds up his July strictures with the ever-convenient exhortation, calling upon us to confess our great sin. With the July number of GLEANINGS came a note from Mr. Root, requesting us to furnish him a list of those customers whose orders we had filled or returned their money. To this we replied as follows:—

SOUTH HAVEN, MICH., July 4, 1881.

MR. A. I. ROOT, Medina, O. Dear Sir:—

Yours of June 30, together with July GLEANINGS, came July 2. In the attitude you seek to place us, there is very little chance for us to reply. Our efforts to procure suitable assistance are doubtless already known to you, hence no explanation is necessary. So far as any crime is concerned, which you charge upon us with such evident delight, we can only say, that we stand by every word of every line we have written. We meant just what our advertisements said at the time they were written. We mean it now. We have nothing to take back. We have never been accustomed to make thoughtless assertions, expecting with the same breath to recall them. "Consistency is a jewel." It has been our constant aim and endeavor to do a straightforward, legitimate business; to pay our honest debts, and be just to all. We are fallible, and doubtless have made mistakes. In the hurry and bustle of business, with its constant demands upon us for the past few months, it could not well be otherwise; but we ever stand ready to rectify them, so far as lies in our power.

With regard to returning money when demanded, we can only say, we have done so as fast as we could possibly. The motive for this attack upon us seems to be, "His prices were also lower than others'." When a man becomes a strong competitor in business, stamp him out. No more favorable opportunity could of course be selected, than when he is laboring under financial embarrassment. This, then, is the rule of action. When American bee-keepers shall know the facts in this case, as they some time may, we shall rest content, willing to abide by their decision.

To notice in detail the untruthful assertions concerning us in last GLEANINGS would require more time than we have at our command. In fact, we have already written more than than we intended. In conclusion, will only say, please discontinue our advertisement in GLEANINGS. Send us your bill for same. We will pay it just as soon as we can do so. We expect that your efforts to "help" us will materially delay the payment of some of our bills. With malice toward none, and charity for all, and a determination to do all in our power to satisfy every just demand made upon us, we are Yours, etc., H. A. BURCH & CO.

Mr. Root, have you corrected the many untruths you have published in regard to us? Did you even print this letter in the last number of GLEANINGS? Let the pages of GLEANINGS answer. Instead of "trying to help us pull through," do they not unmistakably show a determination to do all in your power to not only crush our supply trade, but to blast our reputation for honesty and integrity as well?

In August GLEANINGS you say you have heard of but two cases where we have shipped bees this season. Mr. Root, is that the truth? Did you not know you were writing an untruth when you penned those words? If we are not mistaken, more than the number of "cases" you mentioned had been brought to your attention. If you had desired the truth in this matter, could you not have easily ascertained whether we were shipping bees or not?

It is true, that you asked us for the names of our customers to whom we had shipped bees or returned money. That was indeed a very clever move on your part; in fact, your life work is full of just such maneuvers; but did you expect we were so green as to "give away" our business to a rival in the trade? You know very well, friend Amos I., that a line directed to our express agent would have developed the fact whether we were shipping bees or not. Since you did not care to ascertain the truth in this respect, we may be pardoned for stating, in this connection, that the "Out-trip Book" of the American Express Co. here shows forty-two consignments of bees from us, embracing nearly 150 full colonies alone.

Now a word or two more about the August No. of GLEANINGS. You gave a list of names, with alleged amounts of money sent us for bees, stating that said parties could obtain neither bees nor money, nor even hear from us in regard to the same. Now, Mr. Root, you knew that the first man named in the list ordered other supplies than bees, and that his order had been filled. We say you *knew* it, because we had had correspondence with you personally in regard to the matter. Your list also contained the names of other parties to whom we did not then, nor do we now, owe a single penny, and the name of at least one man from whom we have never received a dollar for any thing. Yet, in your eager desire to make the matter as bad as possible, you pile them all in together, regardless of the truth. Perhaps you will not object to publishing the following extract from a letter in regard to this same list, received from one of your clerks:—

The correspondence of those who complained of you was put all together, and Mr. W.'s card, on which he stated that he would settle with you for $10.00, among them. Thinking that he had sent you that amount of money at some time, I added it to the list.

We give this extract, simply to show American bee-keepers your method of dealing with one whom you did not like, and whom you wished to destroy if possible.

In reply to this letter, we sent the following. We omit the lady's name, as she may dislike so much publicity.

So. Haven, Aug 15, 1881.

Yours of the 10th inst., with explanation, came duly to hand. So far, so good. But how about the others in the list, to which you refer, who never sent us a dollar for bees, or, in fact, for anything else? We suppose of course you acted under Mr. Root's instructions, and it seems that he was anxious to make the list as large as possible. We can arrive at no other conclusion, since Mr. Root has not seen fit to correct the misstatements concerning us in July Gleanings, even after his attention was directed to the same. We do not blame you at all for your part in this matter, and only regret that Mr. Root should have adopted the plan he has outlined in the last two numbers of Gleanings; for one who makes the professions of Mr. A. I. Root, to willfully and maliciously attempt to blast the reputation of a brother, and seek to destroy his business, is past our understanding. We shall, during the present week, prepare and forward Mr. Root an article for publication in September Gleanings.

Yours very respectfully, H. A. Burch & Co.

The only reply received to the above was, that space had been reserved for an article from us in Sept. Gleanings. Now, Mr. Root, you have repeatedly stated that you were doing all you could to assist us; but does not what you have done look like a queer sort of assistance? If inquiries of parties here, whether the sum of $500 could be collected of us, professing that you wished the information for our best good, insisting that you were doing and *had done* your best to aid us; if advising our customers to sue and collect the amounts sent us, if possible; if publicly misrepresenting us and our business can be called assistance, then indeed you are a "friend that sticketh closer than a brother." Then, and in that case, your efforts are deserving of unbounded praise, and should ever be held in grateful remembrance. In fact, such an instance of unselfish devotion, so rarely met in the varied walks of life, is worthy the attention of a Shakespeare, a Byron, or a Milton, and should be immortalized in enchanting story and classic verse, and the name of the benefactor inscribed high on the scroll of fame.

Both in July Gleanings and in your letters to us, you insist that it was but little, if any, short of a crime for us to continue doing business after we had lost a portion of our bees. In other words, because we had met with financial misfortune, we should retire from business, leaving the field to yourself and our creditors to take care of themselves. Perhaps we should have done so. Perhaps we were wrong, in the belief that our family had a just demand upon us; an obligation that required the best efforts of both body and mind to discharge.

Since you have called in question the quality of our strain of Italians, perhaps we may be pardoned for a brief allusion thereto. For many years past, we have earnestly labored to perfect the best traits of the Italian race, and to weed out their objectionable features; in short, to produce the best bees obtainable. We have been assured, by scores of our brother bee-keepers who have purchased queens from our stock, that our efforts in this direction have not been devoid of success. That we have had an abundant stock of bees that *did* survive the rigors of last winter's cold—the most disastrous on record—is well known here; and although we have shipped largely during the past two months, our yard to-day contains more than 200 colonies, which for practical, desirable qualities, we are willing to compare with any apiary in this or any other country.

In regard to filling orders, we have done all that it was possible for us to do, working constantly 18 to 20 hours per day, until, from sheer exhaustion, we were forced to desist. That we did our best to procure suitable assistance is evidenced by the fact, that we offered as high as $50 per month and board, for help; which, at even that high figure, could not be obtained. Early in the season we wrote you, stating that we were short of help, and asking you if you could not inform us of some one whom we could employ to work in our apiary; and although we have been informed that Mr. Root had more applicants than he could furnish employment, he did not give us the desired information. About the 10th of June we succeeded in obtaining one hand who would work with bees. Could we have had two more equally as good, we should not have been behind our orders to-day. Having done all in our power to do to fill our orders, and as it was evident to us that Mr. Root was determined to annoy and hinder us, and secure our trade if possible, we sent out the following, printed on a postal card, to the larger part of our customers whose orders were unfilled:—

South Haven, Mich., Aug. 15, 1881.

Notwithstanding that we have labored earnestly and constantly the present season to fill all our orders, our books show many that are yet unfilled, yours being among the number. In view of what Mr. A. I. Root, of Medina, O., has seen fit to say about us and our business in the July and August numbers of his Gleanings, we request you to make out a statement of your account with us, and mail him at once for payment, which he will do as per agreement. We will settle with him for the same. In case he refuses to do this, please report it to us at once. Our reasons for taking Mr. Root at his word will be given to you all before many months. Yours truly, H. A. Burch & Co.

In view of all the facts in this case as narrated above, we leave it for those who peruse this article to judge whether it was just or otherwise for us to take Mr. Root at his word.

Now a few words to you, Mr. Root, and we are done. Can you honestly and truthfully say that you have not desired to injure us; that you would not rejoice to see us driven from the apiarian-supply trade? If you wished us well, why did you publish an absolute falsehood regarding us in your Gleanings of Nov., 1876? That you did so, we positively affirm; and also that it has never yet been corrected. If you desired to be just and impartial, why did you publish six untruthful statements in your Gleanings for July, 1881,—statements which you could not verify? If, in your every action, you are imbued with the spirit of charity and love, why did you publish statements concerning us in the last issue of Gleanings, which you can not substantiate? Perhaps you can also tell us why you failed to publish the letter of a brother bee-keeper, after you had agreed to do so, when you found it was favorable to ourselves. On the other hand, does not your Gleanings plainly show that your action was conceived in malice, and consummated in hatred; that, while you boastingly flaunt the motto, "Peace on earth, good will toward men," you have so shaped your course, hoping to destroy us without incurring the displeasure of those who possess a spirit of justice and fair play?

We are aware that, with a bee journal to back you, the advantage is all upon your side; and when, by an unsparing use of the whip, you have accomplished the long-desired result, we trust you may be in a fitting frame of mind to sweetly discourse on the subject of charity; that charity that is kind, that behaveth itself not unseemly, that is not puffed up, and seeketh not her own.

Your efforts to injure us may prove a benefit to others; for, as a sequel to this unfortunate state of affairs which you have forced upon us, we venture the prediction, that the bee-keepers of the United States will purchase their supplies during the coming season cheaper than ever before.

Herbert A. Burch.

South Haven, Mich., Aug. 19, 1881.

I really must beg pardon of our readers for thus occupying the reading pages of our journal in this manner. Mr. Burch asked for space in the journal, and I told him it would be gladly given, if it were not too long, and that I would reply, or publish it without comment, as he should decide. I can only make the simple statement, that I have felt no prejudice or jealousy in the least toward Mr. Burch. I do not want the trade in bees, as I have told our friends all along, and I have put my prices high, that they might buy of our advertisers rather than us. I have also given free advertisements to all who would sell bees by the pound. Errors and mistakes will probably be found in all the work I have ever done, and Mr. B. has gone over the whole, and heaped up all he could probably find by a good deal of study. I presume our friends know, without my telling them, that not one of these was intentional. Briefly: The May No. of Gleanings contains exactly the words I quoted; but I now notice, for the first time, that the wording of the advertisement was changed in the June No. If I am correct, I only *refused* to give the names of the neighbors. I may be stupid, but it never occurred to me once that the letter of July 4th was intended for an article in Gleanings. Neither did I understand the letter he refers to was intended for print. I am sure they were in no way marked as such. Our friends all know my practice of publishing almost any thing against myself. Of course, I can not say how many bees were shipped in the month of July; but as I had asked all who had complained, that I might, if possible, make a better report for Burch, and all had replied they had received nothing, I so stated it. I do not think I have made any mistake, for I watched every letter carefully, in my anxiety to see that you *were* filling your orders, friend Burch. It never occurred to me to write to your express agent, and I confess I do not think I should have taken the trouble if it had. I made inquiries at your bank, as I do of all my advertisers who do very much business. When so many letters of complaint about you began to come in, I asked one of the girls to lay them out, that we might make a sort of summing-up of them, before the journal went out. Of course, these parties wished the letters published, denouncing you as a humbug and swindler. I thought I was very lenient in making only the brief notice I did. Please remember, friends, I do not open my letters or answer them; it is impossible, with our business. I asked the clerk who had the heap of letters, to give me names and amounts of those who had sent for bees and goods, and received nothing. It now appears that the first man on the list was one who had received his goods, or a portion of them, but complained to us that the goods were not at all what he ordered. This letter was badly mixed up, and the clerk was somewhat excusable for not noticing that it did not belong in the list. One other was a claim for damages on goods he had received. Some of the writers sent us receipts for the money, and some did not. In the remainder of the letter quoted, the lady explains it all, and assumes all blame. It is true, we did have correspondence in regard to the first name in the list, but with the sea of names before us daily, we have little chance to remember names at all. I am sure I have never refused to correct any thing that ever appeared in GLEANINGS, and this is the first I remember of any complaint of the matter referred to. I shall be very glad indeed to see supplies sold cheaper, and I am sure I have not the slightest wish to monopolize any thing.

Dear friends, I am sorry to have been obliged to waste so much space on a matter of so trivial a nature, when the really sad fact stands before us, that about 100 bee-keepers, altogether, have sent money to Mr. Burch in sums of from one up to one hundred dollars and over,—money amounting, in the aggregate, to *over one thousand seven hundred dollars.** The money has been sent by young and old women and children, and gray-haired men. Many times the money was borrowed, with no other way to get it back except by the honey crop of this season. The greater part of it was from those who had lost their bees in the spring, and were well nigh broken up in spirit as well as pocket. It is true, there *may* be some who claim they sent him money who did not; but as by far the greater part of them received the postal card given, stating that I would pay his debts, there can not be any very great mistake in the amount. These same postals were sent to parties who never took GLEANINGS, and hardly know of its existence. Several asked if I was the company in the firm. Of course, no one expects I am to pay (in case Mr. B. does not) all the debts he owes in the world, just because he had a card in GLEANINGS. Several who saw his advertisement in GLEANINGS have written it would be a great favor if I would pay back the money in case he had secured me, but that if it was to come out of my pocket, they would never touch a copper of it. May the Lord bless these friends! Others have written very bitterly because I would not at once hand over the money before it had been proven whether it could be collected or not. I *have* advised that it should be collected by law, exactly as I advised that the young man who robbed our mails a year or two ago should be sent to the State prison. I do not know but that he, too, thought I lacked charity because I would not save him from his fearful doom.

You know, the most of you, that I am free to use money when I think it will do good. Lest you think I have ample means, I will tell you that I am paying interest on over $7,000.00 now, while my property does not invoice at much more than four times that sum. There is abundant need of my using economy. When I advertised to be responsible for my advertisers, I simply intended to make good any loss that should result from a bad man getting in by mistake, or that, when our customers saw bees advertised very low, as they do now, they would not need to send strings of postals, asking if they could depend on the advertiser. Mr. Burch was a responsible man when his advertisement was inserted. He did not advertise bees in GLEANINGS at a very low sum. All these low offers were made in his circular, which he sent out in great quantities. The money was sent him in response to offers in this circular. It is a tangled-up matter in any case, and I should assuredly be in error if I commenced paying these bills before it is ascertained that it can not be recovered by law from Mr. Burch. After this is determined, I will abide by the decision of any intelligent committee that may be chosen. My mind often reverts to friend Cook, in these times. He helped us when in trouble about sending queens by mail, and I have a sort of feeling he might help us now. For my part, I would gladly abide by his decision in the matter, if he will tell the friends what they have a right to demand of me, and what I ought to do.

Again: This state of affairs, if it be dropped without any action, will be a bad precedent. The idea of receiving money and paying it out, when you have not the wherewith to fill the order, and no means of getting it back to return it, is a fearful one. There is quite a good deal of it in our midst. It threatens a danger to the whole interchange of supplies that has made us acquainted with so many friends, and helped us all so much. I am heavily censured because I did not send out the note of warning sooner, and yet Burch accuses me of wishing to break up his business because I did when I did. My friends, what rule do you wish me to go by? How prompt do you wish me to be when one does not fulfill his promises? By the way, here is one more card from Mr. Burch:—

---

*This is up to Aug. 27th, and more complaints are coming every mail.

> SOUTH HAVEN, MICH., Aug. 20, 1881.
>
> Our published cards mean just what they say. We had them in view when we wrote you, to see if you would not set us right before the public, and not compel us to take the step. We stand ready to ship bees to those who want them; those who insist on money, we have directed to you, since we have returned all we could.
>
> H. A. BURCH & Co.

During the present month of August, I have had notice of just four shipments he has made.; to two persons, four colonies of bees each; to another, some queens, or a a queen, and some foundation to another.

The following, from the paper published in his own town, the South Haven *Sentinel*, of Aug. 20, shows what his own townsmen think of the present aspect of the matter:—

> Too much stress should not be put on the statement of H. A. Burch, that he is working eighteen hours per day to fill orders, or any other excuse he makes. In our next issue we will give a case where he has had money since June, 1879, *two years and two months*, for which the remitter has not received his goods, Mr. Burch making this "eighteen hours a day" plea in *July of last year*. We presume the *Bee Journal* and the GLEANINGS hope his partner, (?) the "Co." part of the firm, will return with wealth to make good the claims of apiarists in different portions of the country. Your excuses are too thin, master Herbert; your only excuse to be made is *thorough restitution of the money*, or an acknowledgment that you really are what so many people consider you.

Just after the above was set up, the following came to hand, which has somewhat the appearance of putting a better light on the matter:—

> I see by August GLEANINGS, in speaking of H. A. Burch, you say there are two parties who have written to you in his favor. It may be that I am included in that list. I will say that I spent two days with Mr. Burch about the first of July last, and bought bees and collected money of him that had been sent, in all to the amount of $263.00. I have no reason to complain of the way in which he dealt with me. If Burch is financially in a tight place, as he says he is, and has returned all the money he can at present, would it not be better to give him a little chance to get out of the difficulty, than to come out every month with him in the Humbug and Swindle column? When I was at South Haven I saw him send back money several times on orders for fdn., because he did not have time to put it up for shipping, when he had the goods just as it came from the mill, then on hand. It is asking a good deal of a man to hold him up in such a public place and then expect him to do more than he could do under more favorable circumstances.
>
> G. W. STANLEY.
>
> Wyoming, N. Y., August 24, 1881.

Friend S., if you will look you will see that Mr. Burch has never been put in the Humbug and Swindle department. It would be quite inconvenient for our friends to all go after their goods, as you did yours. Mr. Byron Walker went twice after his, borrowing money to make the trips; but he says he could get nothing. Mr. Burch is reported worth from $1000 to $1500. Between January and July, $1700 has been sent him in cash, for which he has made no returns. Customers have waited patiently, and will wait, almost any reasonable length of time, if Mr. Burch will secure them. No report has reached us of his having returned money to anybody.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, SEPT. 1, 1881.

Evil doers shall be cut off; but those that wait upon the Lord, they shall inherit the earth.—Ps. 37:9.

FRIEND FARIS sends us a specimen of fdn. with excellent high walls, made by dipping, with copper plates instead of plaster. He says his only trouble now is to get his plates to match so the sheets will be thin enough.

IT has been our custom to make some discount on orders received in Sep., for goods to be used another year; but owing to the great advances on lumber, it is all we can do to hold to catalogue prices. The probability is, that prices will have to go up by another spring, so it will be a good investment to order now, if you think you will need the goods.

STILL no favorable reports from the rubber plates. The complaint seems to be that the wax sticks to them. We try every pair before sending them out, but after thoroughly soaking them in soft water, the wax sheets come off as easily as we could ask; in fact, after the plates have been used awhile, they almost drop off. Has no one who purchased them succeeded as well?

IT is always a pleasure to me to find people who excel in any accomplishment; and every time I see any of the handwriting of our friend M. B. Moore, of Morgan, Ky., it gives me a feeling of pleasure. If you want to see some of it, just send him an order. He puts up queens for mailing almost as neatly as he writes a postal card. Very likely he will soon have so much business he will get to scrawling like the rest of us.

INCOMPLETE ADDRESSES, AGAIN.

I CAN not be responsible for goods that go wrong where the writer of the order does not give plainly the town, county, and State. If you can not have your address printed on your stationery, you will have to take the consequences of forgetting to put it on. Two letters are now before me from friends whom I fear feel hard toward me because I allow them to suffer the loss of a couple of dollars for so trifling a matter as the omission of their county. I know that I would be doing wrong to bear the consequences of your carelessness in these little things any more, as I have been doing. We have plenty of postal guides, but they often fail in what *you alone* can give.

LABELS within 24 hours after the order is received seems to be a welcome novelty, and many are the kind words we have received from our customers in regard to them. Such a trade has sprung up suddenly in them, that we have once or twice been delayed a little on label paper. Our friend "M." has charge of the department now, and you may feel, when you send an order, that you are helping one who is fighting his way toward heaven. His wife works at a case by his side, on Our Homes, Part Second, which will doubtless be out in a month or two.

IN the difficult and perplexing matters that come up in regard to what is right or wrong, I can only promise you to be governed by the dictates of what my conscience tells me to do; and if my course seems to you inconsistent, I do not very well see how I can help it. If it were only the needs of a single individual that I was obliged to consider, it would often be a very simple thing to decide on, compared to what it is now. Intimating that I am not a Christian, unless I act as you think I should, will not help your cause; and I pray to God that it may not make me stubborn. I do not mean to say by the above that I do not want friendly counsel, for I need it now perhaps more than I ever did before.

IT has happened several times this season that some one would order bees, and, after receiving them all dead, they would conclude they did not wany any, and order the money returned. So far as I know, the money has always been returned; but, my friends, after one has done the best he could, and had such a loss, is he not entitled to the privilege of trying again? Turn it around both ways, and see how *you* would like it. If the order is delayed until the honey season is passed, this makes another thing of it; but suppose one orders bees or queens, and the shipment goes promptly, but they come through dead, is he not entitled to the privilege of replacing them? How would you like to send off a colony of your best bees, prepared with great pains and trouble, and receive no sort of equivalent to cover your loss? It is very seldom indeed that two successive shipments fail, so the shipper, after sending the second lot, receives half price for his goods, and the prices on bees and queens are necessarily so high that half price is not a dead loss.

SENDING MONEY BY MAIL WITHOUT REGISTERING.

MY friends, it seems to me as if I was having an unusual number of burdens to bear this fall, and one of the hardest of them to bear patiently, is letters like the following:—

> LANSINGVILLE, N. Y., Aug. 10, 1881.
>
> I have sent you the pay for those plyers twice, and do not think it right for me to pay again. I think the letters both reached their destination, or I would have received them back through the Dead-Letter Office. D. W. FLETCHER.

Friend F., you surely know that mails are sometimes burned up, to say nothing of robberies. Every once in a while we get a letter from the department like the following, which came almost at the same time of your complaint:—

> POSTOFFICE DEPARTMENT,
> OFFICE OF THIRD ASSISTANT POSTMASTER GENERAL,
> DIVISION OF DEAD LETTERS.
>
> The enclosed letter was found with the contents of a mail pouch stolen and rifled at Milford Centre, Ohio, April 23, 1881.

Now, friend F., have you any right to say you *think* the money reached Medina, just because it don't come back from the Dead-Letter Office? I had just about as soon you would say you think *I* have stolen it, as to say you think my clerks did. None handle the mails, or have any possible chance of handling them, except educated, cultured, and intelligent clerks, who are as much above suspicion as *you possibly can be*, friend F. Every reader of GLEANINGS knows how I have borne these burdens for you all, until the chief of the P. O. D. protested against my doing so any more, as you will see by our price list.

THE following is said to have been passed as a law, by the State of Michigan.

> No person shall mix any glucose or grape sugar intended for human food, or any oleomargarine, suine, beef fat, lard, or any other foreign substance, with any butter or cheese intended for human food, or shall mix or mingle any glucose or grape sugar or oleomargarine with any article of food, without distinctly marking, stamping, or labeling the article, or package containing the same, with the true and appropriate name of such article, and the percentage in which glucose or grape sugar, oleomargarine or suine, enters into its composition; nor shall any person sell, or offer for sale, or order, or permit to be sold, or offered for sale, any such article of food, into the composition of which glucose or grape sugar or oleomargarine or suine has entered, without at the same time informing the buyer of the fact, and the proportions in which such glucose or grape sugar, oleomargaine or suine, has entered into its composition.
>
> Any person convicted of violating any provision of any of the foregoing sections of this act shall, for the first offense, be fined not less than ten dollars nor more than fifty dollars. For the second offense they shall be fined not less than twenty-five dollars nor more than one hundred dollars, or confined in the county jail not less than one month nor more than six months, or both, at the discretion of the court; and for the third and all subsequent offenses they shall be fined not less than two hundred and not more than one thousand dollars, and imprisonment in the State prison not less than one year nor more than five years.

Good for Michigan; and may her citizens see that the above is enforced to the very letter, no matter whom it hits.

QUEENS THAT WON'T LAY.

I HAVE many times told you, that once in a while a queen would refuse to lay after a trip through the mails. I wish the friends would remember this when inclined to be uncharitable with each other. See the following:—

> Your Holy-Land queen did not lay before the 9th day. Her trip here was not over a 2-days' one, and I don't believe she was a fertile one when she left your apiary, which, if true, is not fair work. S. W. MORRISON.
>
> Oxford, Chester Co., Pa., Aug. 6, 1881.

I replied, remonstrating against such assertions, which brought the following:—

> I did not say or think you intentionally sent me a non-fertile Holy-Land queen, but I do think such an accident might happen occasionally, or some whom you employ might do such a thing knowingly, as you will admit. We are getting more honey from red clover this season than we did from white. This makes the honey season here a success. S. W. MORRISON.
>
> Oxford, Chester Co., Pa., Aug. 12, 1881.

But, friend M., I do *not* admit that I have a hand who handles bees who would send out a queen, under any circumstances, before she had commenced to lay. We have always been in the habit of willingly replacing all queens that refused to lay, or every one producing only drone eggs; but, please do not make our burden harder, by intimations that we are dishonest—*any of us*. As soon as friend Doolittle advertised queens, I sent for one raised under the natural-swarming impulse; but, although she was a three-dollar queen, she had not laid an egg when ten days old. A few days more, and she was lost. Shall I say, or even think, that he sent me an unfertile for a tested queen? *By no manner of means*, for I *know* he did not. Would *you* do such a thing, friend M., or would you even keep in your employ a boy or man who *might* do it?

WE have to-day, Aug. 29th, 4440 subscribers.

NELLIS' "O.K." double washboard is tiptop for business, and my sister, Mrs. Gray, says *she* likes it because it isn't so heavy to carry up and down stairs as her old one.

As we go to press, the additional complaints of Burch swell the amount to very nearly $2000. Here is a sample of them. The writer is not one of our subscribers:—

I received a card from H. A. Burch & Co., of South Haven, Mich., telling me to send you the amount he owes me. He said you would pay it. I first sent him 30 cents for a bee-feeder, and for bees and supplies, $164.30, and to pay express on bees, $25; making, in all, $189.60. I have been waiting for the money ever since last spring, for I lost my team in a few days after I sent them the money; and to make it worse for me, two weeks ago last Saturday my wheat-ricks caught fire and burned all up, and it leaves me without bread, or any wheat for seed, and the corn crop is almost a failure here, and the money that I sent Mr. Burch was all that I had left me to live on. If you think these lines untrue, write to the postmaster at this place, and find out for yourself; so, please help me out at once, for I am in need of it very much. CHAS. LEAVITT.

Horace, Edgar Co., Ill., Aug. 26, 1881.

OUR MEDINA COUNTY BEE-KEEPERS.

NEIGHBOR DEAN has secured only about three or four hundred pounds from about 60 colonies, as nearly as I can get at it. Neighbor Blakeslee about the same, or perhaps a little better. Neighbor Rice raised bees for me, instead of selling honey, and I believe we have paid him about $500. He had, as you may recollect, about 100 colonies in the spring, and will probably winter about as many more. Neighbor Clark has sold me about $200 worth of bees and queens, that I think he secured from about a dozen colonies. Neighbor Thompson has sold us new swarms, mostly blacks and hybrids, by the pound, to the amount of over $100, and I think he had only about 20 colonies in the spring, and has about the same number now. Neighbor Shane, whom I told you wintered about 170, with a loss not much exceeding 10 per cent, has the enormous crop of 5000 lbs., about 2000 lbs. of which is comb honey, the remainder extracted. As he is offered a good price already, he has made a good season's work of it.

It seems a little strange that one man should get such an immense crop of honey when his neighbors all around him call the season a poor one. Neighbor H. has sold queens only, to the amount of about $800. Although he had a less number to commence with than Mr. Shane, he will probably realize about as much clean cash, but possibly with a little more labor. It is not very bad business, friends, where attended to with industry and zeal. We have perhaps paid out about a thousand dollars for bees, and may be as much more for queens. When the season is over, I will tell you how much I have received for bees and queens.

Conventions.

CONVENTION DIRECTORY.

TIME AND PLACE OF MEETING.

1881

Sept. 16.—Nebraska State Bee-Keepers' Association, at Omaha, Friday night.

Oct. 4.—Eastern Michigan Bee-Keepers' Association, at Detroit, in Y. M. C. A. Hall.

Oct. 5.—South-Eastern Michigan Bee-Keepers' Association, at Ann Arbor, Mich.

Oct. 5, 6, 7.—National Convention of the N. A. Bee-Keepers' Society, at Lexington, Ky.

Honey Column.

CITY MARKETS.

CHICAGO.—New honey is coming in freely, and the demand is good. Prices for light comb honey, in 1 and 2 lb. boxes, are quotable at 18@20c., and for larger boxes, dark and old honey, anywhere from 10@15c. Extracted honey is worth 7@8c.

Beeswax.—18@20c for light, and 15@17c for dark.

Aug. 22, 1881. ALFRED H. NEWMAN.

CLEVELAND.—Choice white honey in unglassed 1-lb. sections is in excellent demand at 19@20c; 2-lb. sections, 17@19c. Glassed sections would sell a few cents less per lb. Extracted honey is in light demand at 12c., but must be in 30 to 50 lb. tin cans. Large pkgs. as bbls. are not in demand.

Beeswax.—20@22c.

Aug. 23, 1881. A. C. KENDEL.

NEW YORK.—Replying to your postal of the 20th inst., permit us to quote new crop comb honey as follows: Best white clover or basswood, in 1-lb. sections, about 25c; do crated, 20@21c; the same in 2 lb. sections, 18@20c.; Fair, 1 or 2 lb. sections, 16@17c.; Buckwheat, 1 or 2 lb. sections, 13@14c. Large boxes, 2c. per lb. less than above prices. We also make a discount on all bills of 10 crates, 1c. per lb. from above prices. Best white extracted, in 150-lb. kegs, 10@11c.; Buckwheat, 8@9c.

Beeswax is selling at 23 and 24½c.

Aug. 22, 1881. H. K. & F. B. THURBER & CO.

CINCINNATI.—Demand for extracted honey is very good. Offerings fair. We pay on arrival from 7@10c. Comb honey brings on arrival 14@16c., but I have bought a lot of 2000 lbs. strictly choice, in frames 5¼x6 at 17c. This honey is raised by friend King Cramer, without separators, and is very likely not excelled by any other lot of comb honey in America.

Aug. 22, 1881. CHAS. F. MUTH.

DETROIT.—Not enough honey has yet changed hands to establish prices. Those who have it are hoping for good prices in view of a short crop caused by severity of last winter. Dealers are buying only when they see a cheap lot. One man has bought 2 tons of good clover honey in 1-lb. sections for 15 cts. It is now retailing at 20 cts. A first-class article in small lots would bring about 16 cts.

Beeswax is worth from 20@25c.

Aug. 23, 1881. A. B. WEED.

I have about 2000 lbs. choice extracted honey, from red clover and basswood, and 900 lbs. very choice in 1½-lb. sections, to be sold to the highest bidder. O. H. TOWNSEND.

Hubbardston, Mich.

Wanted — Comb and Extracted honey; give lowest prices. J. A. BUCHANAN.

Holliday's Cove, W. Va., Aug. 11, 1881.

I want to buy a barrel of good well-ripened white-clover honey. For such honey I will pay 10 cts. per lb., delivered at my station (which is New Holland, Pa.) I. G. MARTIN.

Reidenbach's Store, Lan. Co., Pa., Aug. 21, 1881.

Wanted, on commission, at once, almost any quantity nice extracted honey. Can guarantee money in 60 days after arrival. Good reference given. Will insure 90c. or $1.00 per gallon. E. J. ATCHLEY.

1345 Elm St., Dallas, Tex., Aug. 12, 1881.

I have about 100 gallons extracted honey for sale; probably 1200 lbs. of box. The extracted is white clover and basswood mixed. The box is clover, basswood, and buckwheat. J. P. HOLLOWAY.

Monclova, O., Aug. 20, 1881.

I have 3000 lbs. of extracted honey, clover and basswood, mostly clover, for which I will take 10½c. per lb. in barrels holding from 325 to 500 lbs., or 11 cts. per lb. in kegs holding from 112 to 120 lbs.; barrels and kegs waxed, and thrown in.

Shellsburg, Iowa, Aug. 12, 1881. ROBT. QUINN.

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Conventions.

CONVENTION DIRECTORY.

TIME AND PLACE OF MEETING.

1881

Oct. 4.—Eastern Michigan Bee-Keepers' Association, at Detroit, in Y. M. C. A. Hall.

Oct. 5.—South-Eastern Michigan Bee-Keepers' Association, at Ann Arbor, Mich.

Oct. 5, 6, 7.—National Convention of the N. A. Bee-Keepers' Society, at Lexington, Ky.

Full particulars in regard to the deductions made on the different railroad lines, cost of board in the city, cost of going to Mammoth Cave, etc., are given in a recent number of the *Prairie Farmer*, of date Sept. 14th, if I am not mistaken, but the paper has been mislaid.

Experience Tells.

If you desire such supplies as we have used the present season in securing the largest yield of honey on record, send for our illustrated circular. We furnish the very best Smoker made for $1.50 by mail. Our new book, containing 270 pages and 100 illustrations, gives our system of management, and is known to be the most practical work published. Price by mail, $1.50. We furnish every thing used in advanced bee-keeping.

L. C. ROOT & BRO., Mohawk, N. Y.

A Delborth 3-Horse Engine.

Price $100, 10 per cent off for 30 days. For particulars address REV. J. S. WOODBURN.
Livermore, Westmoreland Co., Pa.

At Kansas City, Mo.,

I breed pure *Italian* bees for sale. I warrant my "Dollar" queens to be mated by pure yellow drones, and guarantee safe arrival and perfect satisfaction.

Tested Queens, - - - - - - - $2 00
"Dollar" " - - - - - - - 1 00

Please address all letters plainly to
6tfd E. M. HAYHURST, *P. O. Box* 1131.

C. OLM'S COMB FOUNDATION MACHINE.

SEND FOR SAMPLE AND CIRCULAR.
5tfd **C. OLM**, Fond du Lac, Wis.

HOLY-LAND & CYPRIAN QUEENS!

Raised in separate apiaries 5 miles apart. Untested Queens of either race this month, $1.50.
H. B. HARRINGTON, Medina, O.

Comb-Foundation Machines.

from one dollar to five. Comb fdn. from 33 to 40 cts per pound. **JOHN FARIS.**
Chilhowie, Smyth Co., Va.

ITALIAN BEES FOR SALE!

Sixty colonies, in 8 and 10-frame hives, Langstroth frame. Write for prices. I will sell cheap, for I intend to close out. THOS. W. DOUGHERTY,
Mount Vernon, Posey Co., Ind.

50 FINE COLONIES of Italian Bees, with tested queens, at $7.00 each. Tested queens, $2.00 each. A few colonies of good hybrids with queens at $6.00. Address O. H. TOWNSEND,
9tfd Hubbardston, Ionia Co., Mich.

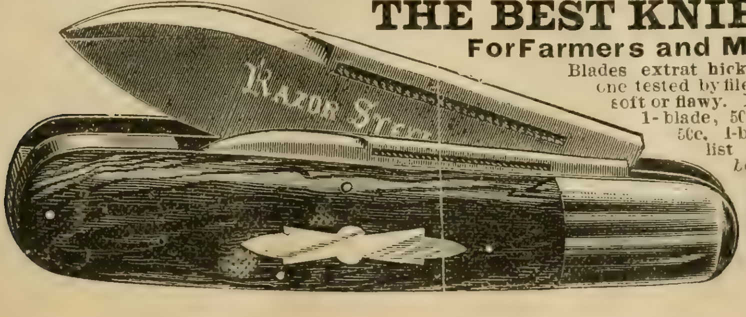
I CAN furnish Bees by the colony and pound. Send for special rates. H. NEWHAUS,
9-10d Burlington, Racine Co., Wis.

50 STOCKS OF ITALIAN OR HYBRID

Bees for sale, either by the hive or pound, in any quantity to suit purchasers. Address, for particulars, 9-10d J. J. KISER, E. Des Moines, Iowa.

THE BEST KNIFE MADE

ForFarmers and Mechanics.



Blades extrat hick, oil tempered, every one tested by file. Exchanged free if soft or flawy. Price postpaid, 75c, or 1-blade, 50c. Medium 2-blade, 50c. 1-blade, 25c. Illustrated list free. Butcher Knife, *best*, 6 in., 50c; Sticking Knife, 60c; Skinning Knife, 75c, postpaid. Please send for our free list. Address
MAHER & GROSH,
34 N. Monroe St.,
Toledo, Ohio.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Newark, Wirt Co., W. Va. 2-1
*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 7tf
*E. M. Hayhurst, Kansas City, Mo. 1-12
*Paul L. Viallon, Bayou Goula, La. 7ttd
*D. A. McCord, Oxford, Butler Co., O. 1-12
*S. F. Newman, Norwalk, Huron Co., O. 7tfd
*Chas. G. Dickinson, Sou' Oxford, Chen. Co. N. Y. 1-10
*Wm. Ballantine. Sago, Musk. Co., O. 7tfd
*W. H. Nesbit, Alpharetta, Milton Co., Ga. 7tfd
*H. Nicholas, Etters, York Co., Penn. 4-10
*Jas. P. Sterritt, Sheakleyville, Mercer Co., Pa. 5-10
*C. B. Curtis, Selma, Dallas Co., Ala. 6-11
*T. W. Dougherty, Mt. Vernon, Posey Co., Ind. 7-12
C. H. Deane, Sr., Mortonsville, Woodford Co., Ky. 8tfd

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 1tfd
S. F. Newman, Norwalk, Huron Co., O. 1tfd
J. F. Hart, Union Point, Greene Co., Ga. 4-3

Foundation Manufacturers.

Who agree to make such foundation, and at the prices given, as described in our circular.

A. I. Root, Medina, Ohio.

Bees by the Pound.

Those whose names appear below agree to furnish bees by the lb., and at the prices given in our circular.

I. L. Scofield, Chenango Bridge, Broome Co., N. Y.
S. C. Perry, Portland, Ionia Co., Mich.
J. P. Moore, Morgan, Pendleton Co., Ky.
W. R. Whitman, New Market, Madison Co., Ala.
Chas. Kingsley, Greeneville, Greene Co., Tenn.
C. D. Wright, Baxter Springs, Cherokee Co., Kans.
H. B. Harrington, Medina, Medina Co., O.
W. St. Martz, Moonshine, Clark Co., Ills.
G. W. Gates, Bartlett, Shelby Co., Tenn.
W. S. Canthen, Pleasant Hill, Lancaster Co., S. C.
J. G. Taylor, Austin, Travis Co., Texas.
T. P. Andrews, Farina, Fay. Co., Ill.
Allan D. Laughlin, Courtland; Law. Co., Ala.
E. J. Atchley, Lancaster, Dallas Co., Texas.
D. McKenzie, Carrollton P. O., N. O., La.
H. L. Griffith, Sumner, Law. Co., Ill.
J. H. Martin, Hartford, Wash. Co., N, Y.
W. A. Pirtle, Cabot, Lonoke Co., Ark.
E. T. Flanagan, Belleville, St. Clair Co., Ill.
J. K. Mayo, Stafford, Fort Bend Co., Texas.
J. F. Hart, Union Point, Greene Co., Ga.
B. Chase, Earlville, Madison Co., N. Y.
S. P. Roddy, Mechanicstown, Fred. Co., Md.
W. J. Ellison, Statesburg, Sumter Co., S. C.
R. A. Paschal, Geneva, Talbot Co., Ga.
A. Osbun, Spring Bluff, Adams Co., Wis.
H. D. Heath, Sherman, Grayson Co., Texas.
N. B. McKee, care of D. & D. Inst., Indianapolis, Ind.
J. B. R. Sherrick, Mt. Zion, Macon Co., Ill.
Otto Kleinow, opp. Fort Wayne, Detroit, Mich.
J. C. & D. H. Tweedy, Smithfield, Jeff. Co., O.

KIND WORDS FROM OUR CUSTOMERS.

The Waterbury watch is a wonder for the money.
A. R. ROUTON.
Magdalena, Merriwether Co., Ga., Sept. 11, 1881.

The smoker came all right. It came in good time, and it beats all the smokers. H. F. PITMAN.
Williams, Lawrence Co., Ind., Sept. 6, 1881.

I received the 15c plane, and was completely satisfied with it. It cuts like a razor, and is very durable.
Eminence, Henry Co., Ky. LEWIS T. DRANE.

It has paid me to advertise in GLEANINGS, and I have tried to give satisfaction, as I said I would, and I think I have done it. H. NICHOLAS.
Etters, York Co., Pa., Sept. 5, 1881.

Both numbers of GLEANINGS are at hand, clean and nice. They read so natural! Send it along the coming year. ALLEN COATES.
Centreville, Crawford Co., Pa., July 13, 1881.

The Waterbury watch purchased of you some time since has now been running about two months, and gives entire satisfaction as a timepiece.
ALFRED ISAACS.
Tarkington Prairie, Tex., Sept. 2, 1881.

The watch was a little slow. After setting the regulator about the sixteenth part of an inch forward it kept as good time as any timepiece I ever saw, *of any price or quality*. ALFRED ISAACS.
Tarkington Prairie, Liberty Co., Tex., Aug. 12, '81.

I know where to send when wanting things in a hurry. It took only 3½ days to send from Michigan to Ohio and back and get a queen, and have her accepted. W. D. HIGDON.
Jackson, Mich., Sept. 13, 1881.

I send you my Waterbury watch, which has kept time nicely for a year past. I injured it by the worst kind of carelessness, or it would be running now.
W. D. LOVELAND.
Lawrence, Mich., July 20 1881.

I received your queen on the 21st of July, and I followed your directions out. I put the queen into my gum, and the tenth day I went to see how she was doing, and I raised one of my racks and it was full of sealed brood. J. P. BELLAH.
Rouge, Texas, Aug. 10, 1881.

I received the 3 dozen pencils, at 10c a dozen, and they are just splendid for the money. I would have to pay 5c for one at our country store. I shall send to you for all of the little things hereafter. Here is the 8c to pay postage on them. WM. H. PUE.
New Berlin, Tex., Sept. 3, 1881.

The knife sent me came to hand all right. I am more than pleased with it. I have found it the best of metal. I was surprised to find it only 35 cts. I have compared it with knives of the same grade here, and could not buy them for less than 75 cts.
Atlanta, Ga., Sept. 4, 1881. A. S. SMITH.

My little Emilie received her toy piano all right, and is very much pleased with it, and sends thanks for the nice book you sent. Walter (my son) also received his saw and plane, and is delighted with them.
E. C. MOSELEY.
Oyster Creek Station, Brazoria Co., Tex., Sept., '81.

The extractor came to hand all O. K. It is a beauty, and I think the price is low; and the knife, why! I just think it is too nice to soil up with honey and wax; but I guess I'll have to use it. Much obliged for your promptness in filling all my little orders. You have my best wishes for future success.
W. H. FERGUSON.
Bloomdale, Ohio, Sept. 11, 1881.

THE TEN-CENT SPECTACLES.

The specs you mailed me May 2d, came safely to hand. I am much pleased with them. It is a real pleasure to do business with such a man.

MARTIN J. BROWN.

Hemphill, Sabine Co., Texas, May 16, 1881.

I was much surprised, on going to the postoffice, to find the A B C. I am delighted with it, and am under great obligations to you. Since receiving it I have neglected David Copperfield and every thing else. I think I have the bee fever badly.

JAMES ROBERTS.

Cobourg, Ont., Can., Sept. 22, 1881.

Please discontinue my advertisement in October GLEANINGS. Not because it is not a good advertising medium, but because it is too good. I want to keep a few queens for my own use, you know. I have had to sell too close several times, trying to fill orders promptly. Success to good old GLEANINGS.

J. P. MOORE.

Morgan, Pendleton Co., Ky., Sept. 8, 1881.

You have credited me with eighty cents on loss of bees; now, you just cancel the credit, and then it will be all right. The bees were dead, came as stated, but I even then got more bees than I expected, as you sent me more for the money than I looked for.

S. C. LYBARGER.

Ganges, O., August 25, 1881.

[May God bless you for your kindness, friend L.; I am sure it does me much good to get such a message.]

The tested queen ordered from you in June was received and placed in a queenless swarm on the 21st of June. To-day I have a superior colony of Italians. Six frames of the golden-striped workers. They are quiet, and I can handle them with so much satisfaction. I have 4 other colonies, all strong blacks, and cross as bees usually are, and I must give them Italian queens too. H. A. EASTMAN.

Ashtabula, O., Sept. 14, 1881.

AN IMPROVEMENT IN WATCH-POCKETS.

The last watch came, and is doing finely; the instructions are an improvement. Let me suggest that every one have a button-hole or a slit put into the bottom of the watch-pocket to let out the dust.

I. B. RUMFORD.

Bakersfield, Cal., Aug. 18, 1881.

[An excellent suggestion, friend R.; but it would never do to put money into such a pocket, or it would lose out even faster than it does now. For that matter, nothing should ever be carried in the same pocket with the watch, any way.

DOLLAR QUEENS ALL PURE.

The fine queens you sent me came all right, and I introduced them all without any trouble; two of them were very nice yellow ones; the other three are very dark; their brood is just hatching now, and I think they are all pure. E. A. EMMONS.

Tampico, Ill., Aug. 24, 1881.

[We find, by referring to our books, that the above were all purchased of our friend E. T. Flanagan. I am very glad to give this report, for friend F. has had some bad luck, and this may encourage him a little.]

Bees have done so poorly for the past three years I feel too poor to afford a journal. I know you have kindly offered to share my loss in the mails, but if you should try to share everybody's losses, you would soon be lost financially yourself. I wintered on summer stands the past winter, 90 colonies out of 95. Now have 150 in good condition for winter.

M. T. ROWE.

Grain Valley, Mo., Sept 12, 1881.

[Many thanks for your kind words about the losses, friend R.; but I do not think that my friends will let me bear all the losses, even if I wanted to. It don't seem to me a man is so *very poor*, with 150 good colonies. Aren't you borrowing trouble a little?]

I have worked the bees for honey this season, and not for increase, and must say there's money in it. Thanks to knowledge gained from A B C and GLEANINGS. I would not be without them. They should be in the hands of every intelligent man and woman who loves bees. I have lent the book to several men who own bees, and they give it the biggest kind of praise. They say it is all right. The honey season has been extra good in this section, with but few bees to gather. I tell you, it looked lonesome without them this season. Acres of white clover, and fields of buckwheat honey wasting, and no bees to gather it. W. C. BUITCH.

Jordan, Ont., Can., Sept. 4, 1881.

BEES AND BEE-STINGS FOR "SICK FOLKS," AGAIN.

I have had a hard time in the bee business this summer, but it seems as if it is for my good, after all. I have had poor health for six years past, and thought that I would go into the bee business for a living; but since I have had all the honey that I could eat, and all the stings that I could stand, my health has improved wonderfully; so much so that I have done the most work in the shortest time this summer that I ever did in my life; and I can say to you, that you will please accept my greatest thanks for the kind advice you gave me last winter. I now have 22 colonies. I hived 4 swarms this afternoon in one hive, which made one pretty good colony. I have had 7 buckwheat swarms. Bees are suffering now for want of attention, but I can't leave the shop, as I have so much work to do. They are filling the porticos in front of the hives with nice white comb, but I have no time to take the surplus honey now. I have taken 59 Simplicity section boxes from my chaff hive, and there are 72 in it now ready to come off as soon as I get the crate, which I am going to set right down on top of the brood frames. I think in two years more I shall give up every thing else and attend to my bees if I have good luck with them. I have not lost a swarm this season.

TIM CALVER.

Union Mills, Ohio, Sept. 4, 1881.

The imported queen came the next day after being shipped. She was in fine shape, and I introduced her the next day, only requiring from morning until night to preform the job. I will send you a photo., and I presume I will get a scolding when I tell you that I am a bachelor, almost 30 years old; but I trust that you will have a little mercy on us old "baches," for you know that the women are almost all afraid of bees. We are trying to find one that isn't. If I find one I will send you her picture too, so you can see how we compare. JESSE C. THOMPSON.

Pierpont, Ashtabula Co., O., Aug. 17, 1881.

[Friend T., I am very much obliged for the picture; but allow me to observe that the other sex are not all afraid of bees. Still, if such were the case I should hardly feel like advising them all to learn to handle bees just because they might stand a better chance of getting married. Both boys and girls should get acquainted, not only with bees, but with cattle and horses as well, that they may be useful in any emergency; and then when they become useful members of society, there is always some one of the opposite sex who will need their help. I have sometimes been tempted to say, that the reason some people can never find any thing to do, is because they were good for nothing; but it can't be that that rule would account for your not being a married man, can it, friend T.? Is it because the other sex are afraid of bees, or that you are afraid of the other sex?]

THOU SHALL NOT TAKE THE NAME OF THE LORD IN VAIN; FOR THE LORD WILL NOT HOLD HIM GUILTLESS THAT TAKETH HIS NAME IN VAIN.—EXODUS 20:4.

Every single time I have sent to you for things you have sent them promptly, and often some little thing as a present; then how very unkind of me, in sending the order, to write the weather was "hotter than ——." Friend Root, I am one of the worst men to swear in the United States, having never heard but one man as bad to swear. It was 106° in the shade when I wrote, and what I wrote was nothing to what I thought; so here are many thanks for your kind reproof, and a promise not to write to any person such language again. No change until last night,— a good rain. ROBERT REYNOLDS.

Utica, Lasalle, Co., Ill., Sept. 8, 1881.

[You see, I wrote a remonstance to friend R. for his profanity in a letter; but as you will observe, it did not make him angry either. Now, friend (or friends if you choose), profane swearing is an awful thing; it is a sin against God that can not be overlooked unless repented of; and, if I am right, it is one that seldom goes unpunished in this world. I am very glad you have promised to put no more such words on paper; and, in fact, friend R., I thank God for that. But can you not take one step more, and say that no one shall ever again *hear* you utter such words? Somehow I seem to feel that you will take this step, and the next one after that will be to resolve, with God's help, you will not even tolerate such thoughts. Thoughts are the source from which actions spring; and if you keep it all in, after a little while the *thoughts* will not keep coming in. Are you not thankful for that little rain you speak of? Folks who complain when things don't come, certainly ought to give thanks when they *do* come. When going to Columbus a few days ago, a man was swearing most bitterly because the train was behind and failed to connect as he wished it to. I thought he was complaining prematurely, and pretty soon a friend spoke and told him his train had not gone, after all, for there it was right before his eyes, waiting for him to get aboard. I watched him to see the change come over him, and to see if his face would not soften down into at least a smile of thanks. Do you think it did? I am sorry and sad to say that he received the good news with only another string of curses against God and the railroad men. Now, boys, seriously, what do you think of such an attitude of heart? What *can* God do with such awful ingratitude? Where does such a man really deserve to go?]

RECENT ADDITIONS, CHANGES, AND IMPROVEMENTS, IN OUR COUNTER STORE.

A NEW circular of our Counter Store goods only, is ready to mail on application.

OUR Counter Store was again taken over to our fair grounds, and nearly $300.00 worth of goods were sold from it in the two days.

WE have succeeded in getting Mason's 1-qt. fruit cans on our 10c Counter. We can ship them from the factory for $13.50 per gross. Pint jars, $13.00

To go with our Waterbury watches, we have a little nickel alarm clock, called the Fairy Queen. The Fairy Queen is not only a little beauty, but it is a gem of a timepiece. Price $2.00, or $2.25 if sent by mail. Like the watches, the little clocks are carefully regulated by us before they are sent out.

AN IMPROVEMENT IN OUR COE'S PATTERN WRENCHES.

OUR Coe's pattern wrenches are now all made of *wrought* instead of malleable iron, as heretofore, and are a most beautiful strong wrench. Three sizes, 25, 50, and 75c.

WE have just succeeded in making a beautiful confectionery of maple sugar. Somebody has said that the craving for candy among children is right and proper, for it is nature's demand for the sugar they need. Well, if it is all pure maple sugar, and nothing else, we are sure it is wholesome. It is perfectly dry to the touch, yet dissolves easily in the mouth, like cream candy. Price 20c per lb. We have it in little gauze bags on the five-cent counter.

BESIDES the Waterbury watches in nickel-plated cases, we now have them in cases made of celluloid. They are put up in three colors—pure black and pure white, and in a mottled celluloid, called malachite, from its resemblance to that stone. The prices in the celluloid cases are just one-half more than the ordinary nickel cases. We are now selling our seventh gross of Waterbury watches. Considerable improvements have been made in them of late, and the factory now have a system of repairing all watches at a uniform price of 50 cents each, no matter if you should drop your watch and step on it.

THE FIVE AND TEN CENT HONEY-PAILS.

I AM sorry to say, that those pretty little covered tin pails we have been selling so many of have advanced in price, so that we will hereafter have to charge $4.25 and $8.00 per hundred for the 1½ pint and 2-quart respectively. Even at the present prices it seems a wonder how they can be made for any such money. Within a year we have purchased 35 *gross*—or something like 5000 of them. Do you wonder that manufacturers give us low prices? In selling your honey, almost anybody will give 5 and 10c for the pretty little pails; and at these prices you make a safe little profit. Where bee-men have a stock on hand, they can generally retail a good many to the neighbors, in the course of a year. We can send you samples by mail, if you wish to see them; but where ordered in lots, they must go by freight. Where you are so far off that freights eat up the margin, you will have to add freight to the prices.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

CHICAGO.—*Honey.*—The honey market is brisk, and the prices steady. I have just bought 20,000 lbs. extracted at the prices quoted. Light comb, in 1 and 2 lb. boxes, 18@20c; in larger boxes, 2c less. Extracted, 8@9c.

Beeswax, 18@21c. ALFRED H. NEWMAN.

972 West Madison St., Chicago, Sept. 22, 1881.

CLEVELAND.—*Honey.*—We quote a slight improvement in comb honey. One-pound sections are ready sale at 21c for white, and 2 lbs. 19@20c. Extracted continues dull at 10@12c.

Beeswax.—20@22. A. C. KENDEL.

Cleveland, Ohio, Sept. 20, 1881.

DETROIT.—*Honey.*—The honey market is not very firm, owing to the difference of opinion between buyers and sellers. The former are reluctant to pay more than they have done in other years, and the latter believe that prices will be high before spring, and wish to get the benefit. A good article in salable shape brings readily from 17@18 cents

Beeswax.—20@25 cents.

Detroit, Sept. 24, 1881. A. B. WEED.

CINCINNATI.—*Honey.*—There is a good demand for extracted honey, which brings readily 7@10c on arrival. Arrivals of and demand for comb honey is rather indifferent. It brings 14@17c on arrival.

Beeswax.—20@22 cents. CHAS. F. MUTH.

Cincinnati, Sept. 23, 1881.

NEW YORK.—*Honey.*—In reply to your postal of the 20 inst., permit us to quote honey as follows:—Best white, in 1 and 2-lb. sections, 18@20; fair white, in 1 and 2 lb. sections, 15@17; mixed and dark, in 1 and 2-lb. sections, 12@14. Large boxes, 2c per lb. less than above prices. Best white, or linden extracted, 10@11; dark extracted, 7@8.

Beeswax.—23@25c. from prime to yellow.

H. K. & F. B. THURBER & CO.

New York, Sept. 23, 1881.

1000 lbs. of honey, in 1-lb section boxes, for sale by

J. LUTHER BOWERS, Berryville, Va.

We want one or two barrels of choice white-clover honey. State price delivered here.

B. SALISBURY & CO.

Battle Creek, Mich., Sept., 1881.

I have for sale two barrels of linn honey, 400 lbs. each. Will take 9c per lb. delivered on board cars here. Honey is extra good.

J. B. MURRAY, Ada, Ohio.

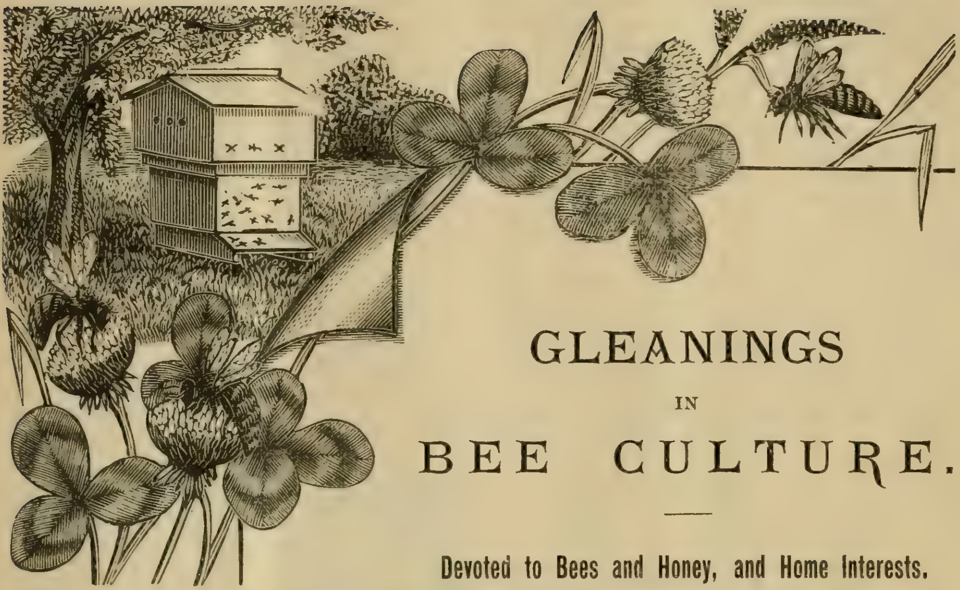
I would like to buy one barrel of good extracted honey, at the rate of ten cents a pound; and, if suited, will take several barrels more. Any person having such, please address CHARLES LEYNIS.

Morganville, Monmouth Co., N. J.

I have about 6000 lbs. of extracted honey, put up in kegs holding from 50 to 120 or 130 lbs. Will sell the white at 10c, and the dark at 8c per lb., delivered on board cars at Durand, kegs thrown in.

C. H. STORDOCK.

Durand, Ill., Sept. 20, 1881.



GLEANINGS
IN
BEE CULTURE.

Devoted to Bees and Honey, and Home Interests.

Vol. IX. **OCT. 1, 1881.** **No. 10.**

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.
Established in 1873.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE. Clubs to different postoffices, NOT LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

NO. 23.

A CHEAP OBSERVATORY HIVE.

I DO not know whether you would call it an observatory hive or a house apiary on a small scale; but this is how it came about. One hot day last August, two nice queens hatched out in the lamp nursery, and there were no nuclei upon which the pin in the registering card pointed to "missing;" neither were there any more empty hives in which to start nuclei, and, as I disliked to kill the queens, I stood for a moment wondering what I *should* do with them, when my eyes alighted upon a light shipping-box in which friend Nellis had sent me a full colony containing an imported queen. Why not fix up that box for a hive? thought I; yes, and fasten it up in one corner of the shop, and have a house apiary, was the next thought. In just half an hour the bees were flying from two holes in the sides of the shop. These two holes were the entrances to the two nuclei that occupied the shipping-box. A piece six inches square was cut out from one side of the box; this piece was then hung for a door by means of *leather* hinges, and it was kept closed by means of a little latch made from a pin. The inside of the opening was covered with a piece of glass, and, by watching here a few minutes, I saw that *one* of the young queens had been accepted, and was walking about quite at her ease. I presume that some of you can imagine the pleasure that I have experienced in "fishing" nice yellow queens out of this impromptu hive. How I do love to fix up nuclei in some such out-of-the-way place, in hives that cost almost next to nothing, and then once in about ten days find them occupied by nice laying queens.

EXPERIMENTS IN WINTERING.

I am now making some experiments with a view to help solve the wintering problem. Of course, the few experiments that I can make will not amount to a great deal; but if one hundred bee-keepers would make the same experiments for several years in succession, they would certainly prove *something.* The statistical table so carefully prepared by friend Newman, for which he certainly deserves a vote of thanks, shows that the care we give our bees in preparing them for winter is not entirely wasted – we have at least made *some* progress; but until the percentage of losses in wintering is considerably less than it has been for the past few years, our beloved occupation will not take a place in the front rank of agricultural pursuits. I hope to live to see honey plenty and cheap (because of no loss in wintering bees;) to see it used upon every table, just as much as butter now is, and if I lose a colony during the winter, I wish to be able to give the reason with at least as much certainty as a veterinary surgeon can tell what caused the death of a horse or cow. I admire friend Heddon's course; he does not know what is the trouble, and candidly says so; but he is going to "cut and try" until he finds out what it is. I say, let others do likewise; let us all put our shoulders to the wheel, and never stop until this one great difficulty is surmounted. Until we can winter our bees with uniform success, winter after winter, we are unworthy the name of bee-keepers. We can control the number of bees that there are to be in a colony, and, by our being able to do this, our bees need not perish for want of numbers; we can control the kind and amount of food that they shall have during the winter; and if sugar is better than honey for winter stores, we can give it to them; but if bees are wintered out of doors we can not control the *temperature;* while if they are in cellars or special repositories, we *can* control the temperature. The uniform success that George Grimm and L. C. Root and others have had in wintering large numbers of colonies in cellars, helps to confirm me in the belief that indoor wintering, *properly managed*, is the best for our northern climate.

But I fear that I am wandering, speculating and theorizing a little too much; the experiments that I am making are to leave some of my colonies out of doors, protecting most of them with chaff cushions, to put some of them in the cellar, and to put some of them in clamps on a dry sandy knoll. Some of them are furnished entirely with white sugar, others in part, and some are given early-gathered honey, and others not. Part of those in the cellars will be given a fly, if the weather permits, and the remainder will not be taken from the cellars until they can gather honey. I have not the space to enter into all of the particulars now, but next spring I will tell you how they all wintered.

W. Z. Hutchinson.

Rogersville, Genesee Co., Mich., Sept., 1881.

FRIEND GRIMM'S METHOD OF FEEDING FOR WINTER.

AND ALSO HIS METHOD OF VENTILATING IN CELLARS.

FRIEND ROOT:—Your gentle reminder in Aug. Gleanings did not escape my notice, but I did not have time to write any thing for September number. Though somewhat late in the season, a few words on the subject of feeding may not be amiss. I shall not get around to feeding any before October myself, and if I tell you how I do it I suppose it will be sufficient. For my part, I desire rather to hear practice than theory; and, to some extent, others can be judged by one's self.

As soon as I can get time I will go to each of my outside apiaries (five) and examine every colony, and weigh them. Those that have sufficient honey, a good queen, are strong in bees, etc., I do not disturb till the time comes to haul them home or to the cellars in which I winter them. All those that are not in proper shape, I haul to my home apiary so as to have them handy for treatment. After uniting all that is necessary, I supply them partly with combs of honey, and feed sufficient sugar syrup to give them a good supply for the winter. If I had extracted honey on hand I would feed that; but as I did not raise any this year, I will feed syrup made of the best white coffee sugar. I feed this by means of a tin can, about the size of a peach can, through a hole in the honey-board. The can has a piece of perforated tin about 1½ inches square on the bottom, and a rim of tin around the edge, ⅝ of an inch wide. It is filled on the same side through a small can-screw cap, and turned over by a quick movement. I suppose it is on the principle of your pepper-box feeder. The honey that bees gathered this fall is good, and I shall therefore feed only those that have not enough for the winter.

I am getting so many inquiries about how I ventilate in the cellar, that it is getting troublesome to answer them for a 3-cent stamp. Allow me, therefore, to state in Gleanings exactly what I do. I use the 8-frame Langstroth portico hive, with honey-board, exclusively. When I put them in the cellar I set them in rows, six high, the rear one an inch higher than the front; and this is the ventilation: The entrance, ¼ inch high, and as wide as the hive, is left open and kept clear of dead bees during the winter, and the honey-board is slid forward so as to give an opening of ¼ inch in the rear. That is all, and it is enough. It permits the circulation of air through the hive. Vapors arising from the bees are either carried off, or condensed and run out of the front of the hive—the latter very rarely, however. Nearly all my hives are painted on the inside, so the moisture will not soak into the wood. Once in a while a hive is found where a few outside combs are molded some, but the cases are few. Almost all have as bright, dry combs in the spring as in the fall; and bear in mind, too, that I leave *all* the combs in the hives through the winter, and do not take the trouble to crowd the bees together by means of a division-board: the cold has always done that most effectually. If I removed the spare combs, I do not think that I would have a single moldy comb in the apiary.

In reference to winter passages through the combs, I would say that I never made them and never needed them. The bees pass under the honey-board and over the frames from comb to comb. The above method of ventilation serves the purpose of absorbents in the shape of chaff and the like, admirably; and mutilation of the combs is unnecessary. Of this I am certain, that there must either be ventilation similar to this, or absorbents of moisture must be used in its stead, as nearly always, when through carelessness the cover had been slipped back in lifting another hive on top, the colony was either dead in the spring, or had moldy combs. Next winter I shall have a large tank of water, holding about 5 barrels, in one of my cellars; and I think it will materially help to purify the air, and secure an even temperature. During warm weather I can cool the water with ice.

Geo. Grimm.

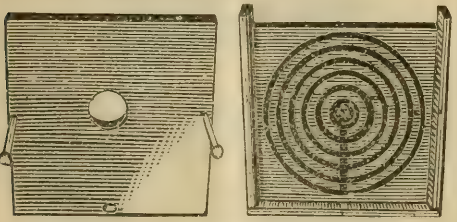
Jefferson, Wis., Sept., 1881.

I expect now, friend Grimm, some of the boys will want to know how you make the syrup; whether it is boiled, or only stirred up cold, my favorite way. We are very glad you have told us so plainly about the ventilation in the cellar. You see, friends, he has it every bit as open as we have talked about, when sections were left over the frames for outdoor wintering, and, very likely, a little more so. Just think of it! A ¼-inch slot the width of the hive, at both entrance and highest point. I should think the Simplicity hives would be real handy to put into the cellar, for we could let the bees wax down the enameled sheets as tightly as they pleased; and as they were put in the cellars, just roll back the tin on the back end of the enameled sheet, to make this space. These sheets are usually kept above the frames enough for a good bee passage, by little pillars of wax. When the bees are put out in the spring, the end of the sheet can quickly be turned back in place again, and they are snug and tight for brood-rearing.

Neighbor Dean wintered his last winter, part in cellar, part in his old sawdust-packed bee-house, and one out of doors in chaff packing. The one out of doors was about the best, but he said it was such an awful job to fix them up that way, he greatly preferred to set them in the cellar, and the cellar, did much better than the bee-house last winter. John and I think it less trouble to put them in chaff hives, and then we have the chaff hives ready for the cool weather next spring. Neighbor H. also says, "Chaff hives by *all means*," although he has a dry cellar right close to his apiary.

STILL ANOTHER BEE-FEEDER.

By to-day's mail I send you a model of a bee-feeder. The full size of feeders I use is six inches square, made of inch lumber. I put as many circles ⅜ inch wide as I can get in, with a center 1½ inches in diameter.



DE WORTH BEE-FEEDER.

Now, friend Root, please accept this idea from me as a token of respect, knowing that you have and will labor hard to promote bee culture, and also that you will give it cheerfully to the bee-keeping fraternity. **Wm. De Worth.**

Bordentown, N. J., May 15, 1881.

The novel feature of this feeder is, that it is all made while the block is in a lathe; and with a proper gang of chisels, the grooves can all be cut almost in an instant. A cover is put on, as shown in the cut, and when the feeder is pushed up against the entrance, none but the bees of the hive can get into it. It is filled through the hole in the cover, which should be then covered with a piece of glass, or something of the kind, to keep out meddlesome noses. No bees can drown in this, and there is no opening of hives to replenish it.

HURRAH FOR YORK STATE ONCE MORE!

OVER 180 LBS. TO THE COLONY, FROM AN APIARY OF 108 STOCKS IN THE SPRING.

The spring found me with 108 colonies, or hives, that had bees in; you all know how weak bees were this spring. Well, about 50 were all right. I used that 150 lbs. of fdn. I got of you, with good success. It worked nicely with two wires across a Langstroth frame, or lengthwise, and imbedded in the fdn. with button-hook. Now for what I have done all alone: I increased to 208 in good condition, and have taken 15,100 lbs. of extracted honey and 4500 lbs. box honey. One colony, with its increase, gave me 330 lbs. of box honey. The increase was 4 artifical swarms, with plenty of honey. How is that for 16 years' experience? I sold my white box honey for 16c, and the dark for 12c.

Will you please answer one question?

WILL MOTH-WORMS LIVE ON PURE WAX?

Will a moth-worm live and come to maturity on new comb that has had no brood in, if they have had no bee bread or pollen or dead bees to eat?

W. L. Coggshall.

West Groton, Tomp. Co., N. Y., Sept. 19, 1881.

Why, friend C., your great achievement for this year has so nearly taken my breath away I can hardly come down to such simple things as moth-worms and beeswax; but on the spur of the moment I should say that moth-worms could not live on clean empty combs alone, for we never find them on sheets of fdn., before they have been put into a hive. Now, we want you to give us a full account of your summer's work, and tell us all about how you did this. I presume you had a great flow of honey; but even if you did, it is not every one who has the "gumption" to take care of such a lot when it does "rain porridge." Did your neighbors do as well? what kind of boxes do you use, side or top storing? how did you extract? how many hands did you have to help? Why, sakes alive! I have almost a mind to take my automatic pencil, and a blank book, and go down to see you. Are folks "friendly like" down in your parts? and do they keep any dogs that will bite?

THE POISON OF THE BEE AS A REMEDIAL AGENT.

MORE FAVORABLE TESTIMONIALS.

I want to tell you about bees as a medicine. June 9th, Mr. George Wilson came to me for 20 bees; said he wanted them for a medicine Dr. Allen, of White River Junction, had advised him to try. He was very sick with dropsy; had not walked any for four years; his limbs were swollen so badly that they cracked open and discharged terribly, and his clothes would not reach around him by a foot. After taking medicine one week he could button them with ease. He had no faith in it at first, but "drowning men grasp at straws." I furnished him two lots of bees, 20 each, during the summer; last Thursday morning, Aug. 25, he called on me for more bees to prepare a bottle of medicine to take home with him; his home is in New York, where he is in business. He says he is completely cured; can walk all over the village of Bellows Falls; would not have been alive now, if it had not been for *bees*. Medicine, how prepared; Put 5 drops of alcohol in a bottle, then put in 20 bees; let them stand 20 or 30 minutes, or until they sting each other to death; then add 4 oz. alcohol. Dose, 5 drops every hour. Mr. Wilson wants every one to know of his wonderful cure. **Guy Clark.**

Bellows Falls, Vt., Aug. 31, 1881.

It has often seemed to me as if such an active agent as the bee-sting might by some means be utilized in medicine. It is sure, and goes right to the spot, as we all know, and I have wondered if it might not rival powerful liniments for neuralgia, toothache, and the like. It would doubtless extinguish any toothache, if it only worked against it; but if it should happen to add to the pain, wouldn't there be a "row in the camp"? Well, it seems the poor fellow-sufferer above found it just the thing; but I have, in spite of myself, been wondering if he would not have got well any way, or if it did not so work on his imagination, that he stirred around more and thus got where nature could work to better advantage. You see, I have great faith in getting people to wake up and stir around, even if they *are* sick some; and the sight of the doctor, visitors, or even a light shock of electricity, often does wonders in that way. Never mind; let us get at the truth. Bee-sting medicine could be put up cheap where they are going to brimstone their bees this fall, like the friend mentioned in our editorials.

OUR OWN APIARY AND HONEY FARM.

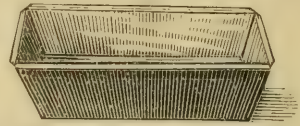
IT is now the 28th of September, and the severe drought has stopped the flow of honey from almost every plant, not even excepting the Simpson. The Spider plant still blossoms, yet but few of the blossoms produce honey. During the past few days, however, we have had long soaking rains; and if frost keeps off, we shall have some honey yet, perhaps.

NEIGHBOR H.'S EXPERIMENT.

Do you remember what Neighbor H. said last month about feeding with a tin pan? By the way, I guess I will tell you of an experiment of his. It was, I think, about the 15th of May that he brought a pound of bees and queen, to be shipped to a customer. It had been jolted in the buggy, or something, and as the day was very sultry, it was evident, from the dampness of the bees, and from the way in which they tumbled helplessly from one end of the cage to the other, they would not live many minutes, unless speedily taken care of. I offered to look after them, but he said he was going to take them for an experiment, to see what a pound of bees would do, with a good queen, started the middle of May. Accordingly they were let out on a few empty combs, and one of Neighbor H.'s long, black, Holy-Land queens introduced to them. They soon revived, and the queen went right to laying. As soon as honey failed, they were treated to pans full of the sugar syrup he told you about. They are now five fair colonies, and there is little doubt but that he will winter them successfully. When you come to see us, ask to see Neighbor H.'s department. Besides the five hives, he has the Albino colony that I spoke of a short time ago. The Albinos are, to tell the truth, rather pretty bees. If our bees should winter well this season, I have been thinking of offering some gentle bees in small hives for sale, for the "Juvenile Department." Of course, they would want some pretty bees that are nice to handle and nice to look at. I have thought the Albinos might be just the thing. If they should happen to produce great crops of honey, too, it would be quite a joke in favor of our friends Valentine and Pike.

HOW WE ARE DOING OUR FEEDING THIS FALL.

Neighbor H. has all chaff hives, and it is a very easy matter to set a common tin pan on the frames, in the upper story. In our queen-rearing, however, we have about 200 Simplicity hives. Many of these have only three or four combs, so that if we had a pan that would set in beside them, it would save the expense and bother of an extra upper story, while we are feeding to keep the queens at work. Selling bees and queens as we do, you know it is quite important to keep the queens laying every minute possible. Well, we tried using Simplicity feeders, but it was too much work to fill them up so often. A tin pan will hold more sugar than a dozen Simplicities; but a tin pan won't go into the hive at one side of the frames, especially if we have a division-board in, beside the four combs. On the five-cent counter we have, as you may have noticed, a two-quart bread-pan.



THE BREAD-PAN FEEDER.

These pans are 6 in. wide, 10½ long, and 2¼ deep. They have flaring sides, so that they nest into each other, and a hundred or more of them occupy but little room. They cost, as you see, but 45c for 10, or $4.00 for 100—the same price as the Simplicity feeders, and yet, as they nest, occupy much less space for shipping or stowing away. Each pan will hold 3 lbs. of granulated sugar and 1 lb. of water. A Simplicity feeder will scarcely hold 8 oz. of sugar. Now, the bees would drown in these pans, as you know, were it not for the piece of cheese cloth; and we have been a little surprised to find that spreading the cloth in the pan, with the sugar on top of it, answers every purpose, in warm weather. The cloth should be sufficiently large so it will not get pulled over into the pan, and the pan should have one edge nearly touch the combs, or division-board. If you do not have a division-board, be careful the bees do not build a comb on the mat above, after they have been fed a few days. We just set the pans with their cloths over them in the hives, and then with a 5-cent dust-pan fill each one heaping full of granulated sugar. Another hand, with a can of pure water (like the one shown beside the chaff hive, under "Feeders," in our price list), pours in water slowly, as much as he can, without running the tins over. Of course, the bees will have the liquid portion out in perhaps a couple of hours; but the moist sugar they will work on and dig in for several days, and may be a week. Be sure that the bees find it, and it may be well to sprinkle a little over them, until they get a taste. One very pleasant feature of this way of feeding is that you have no trouble with robbers, for they can do nothing with the dry, sand-like sugar, neither can they with the pure water. You can, if you choose, roll your barrel of sugar right out in the apiary, and leave it uncovered until you get through, providing no rain or dew gets into it. With chaff hives, just set the pan right on the frames and turn back the mat slightly.

LEAVING SECTIONS ON ALL WINTER.

BY THE ONE WHO FIRST SUGGESTED IT.

AS I sit at the head of the class who leave sections on all winter, and by reason of having first started the investigation, I feel a lively interest in all that has been said the past five or six months on the subject. Having carefully noted the developments and sifted the evidences, I would now give you my conclusions, which are based also upon my own experiences of top ventilation.

In the first place, a rather serious error has crept in, which might be the means of serious losses another long cold winter: it is this: you recommend a ventilating opening right over the cluster. This, in my opinion, would be very dangerous, unless it passed into a nearly tight receptacle above, which would prevent a direct draft through, such as well-sealed honey-boxes or broad frames made snug and tight with propolis at the top-bars; any crack or hole too large for the bees to close should be covered with strips to prevent draft. If the bees are disturbed too late in the season to prevent their closing up again, I would strongly urge covering the broad frames snugly with enameled cloth, heavy manilla paper, or any thing else air tight.

If colonies are not strong and well provisioned, we would not put on sections, because they can not be got at for examination so readily; but put a few narrow cross-sticks, long enough to reach across the 10 frames, placed near enough together to insure free passages; cover these with enameled cloth to prevent them gnawing, then a straw mat the full size of second story, and chaff cushion on top.

The covering over enameled cloth will prevent the condensation of moisture; but if there should be a condensation, it (the condensed water) will be eagerly sought for by the little fellows as soon as they begin to stir in warmer temperature. Neither clean water nor fresh air will hurt them if not in excess; but excess of either would be injurious. The experiences of the past winter have shown that bees can easily bear a confinement of 5 or 6 months if kept perfectly inactive; but as soon as incited to brood-rearing, the trouble begins. My opinion is, that, when not breeding, bees will consume only honey—no pollen to any extent; then their excrement will be dry and very slight; but when, by feeding brood, they are compelled to eat and manipulate pollen as well, they need to void the greater residue; and if prevented in this by confinement, they become diseased.

Now, to prevent unseasonable brood-rearing would be the great end to be sought; for, first, it excites to flying out at too low a temperature; second, it exhausts stores tremendously; third, it shortens the lives of workers materially; fourth, it is undoubtedly injurious to the queen to greater or less extent; and last, it is no benefit to anybody.

Feed nocturnally during September and October to get the hive full of young bees; at the same time shortening the lives of the July and August brood for the benefit of the winter supplies; then there will be goodly numbers left in March and April. Keep cool by gentle top ventilation, but not forgetting free access to all the combs by passages above the top-bars; avoid a direct draft through the center; see well to it that they have plenty and to spare of sealed stores; and if you can, shade entrances from the sun.

If any colony persists in flying when snow is on the ground, give a little more top ventilation; this will stop them readily. The broad frame with sections on all winter just suits us for strong colonies: it gives the necessary space above the frames, and it keeps the hive too cool to rear brood; it gives a dead-air chamber above, without a draft; the bees will not enter the section department except in a body; and if they should, it would be the warmest part of the hive, from which they could again emerge at every point.

When willows or maples begin to swell their buds, take off the sections; supply sealed frames of honey, or trays of candy, where needed; cover down tightly, and trust in God for the "increase."

Cleveland, O., Sept. 14, 1881. A. C. KENDEL.

Thanks, friend K. While I agree with you in nearly all, I am not quite satisfied that a small opening right over the cluster will do harm. A few days ago I met a bee-man in an adjoining county, while waiting for a train. He had, if I recollect, last fall, 37 colonies. All died but one. I called to see this one. It was an old box hive, with holes open in the top, covered with a box set over it loosely. More than that, it was split from top to bottom, so it would seem the wind might almost blow through it. Such cases have been mentioned too often to be accident. (See report on page 497). One thing I fear somewhat, is that bees sometimes, after a cold spell, instead of getting out at the entrance get into the upper story, around the ventilators, and there perish. In the old box hives, if the entrance was stopped up they could go out of the hole on top, and come back in the same way. In our back numbers it has been already suggested that the entrance is better if on top of the hive for winter. Has this point been sufficiently looked into?

The following came to hand after the foregoing was put in type:—

When I wrote you two days ago, I touched lightly upon bees eating honey in preference to pollen except when rearing brood. To-day I read with pleasure Mr. James Heddon's article in the *A. B. J.* of Sept. 7th, where he takes very much the same ground. Now, while it gives me pleasure to know that these thoughts came out almost simultaneously, and are the outgrowth of experience and observation, it would appear as if this thought had been suggested by Mr. Heddon, which is not the case. I trust that such suggestions will result in further investigations of the thoughtful ones, and prove of mutual benefit to us all. A. C. KENDEL.

HOW TO MAKE A MACHINE FOR PIERCING TOP AND BOTTOM BARS FOR WIRED FRAMES.

PROCURE as many harness awls (those having a diamond-shaped cross-section) as you have wires in your frame, and grind off the acute angles so as to form a chisel or cutting point perhaps 1-32 in. wide. Grind about ⅝ in. up from the point, and let the slant be nearly uniform. Now draw the temper from the shanks so that a file will cut them, and with a square-cornered file cut a notch in an obtuse angle of each shank at or a little above the largest part, cutting it nearly half off, and making the notch wide enough to admit the uniform diameter of an 8d. nail.

Take a hard-wood block 2x¾ in., and 2¼ in. longer than the distance between the outside wires in your frame, and, after making it to correspond with the wires in your frame (center of frame at center of block), cut a groove at each mark just right to receive half of the shank of an awl, letting the point project square from the edge of the block about 1¼ in. The obtuse angle of the shank is let into the wood. Now take a block the same size as the other, but 3 in. shorter, and groove it so that, when the blocks are placed center to center and face to face, and securely bolted or screwed together, the awls will be held quite firmly in place. Before finally putting them together, however, drive a piece of nail into each of the grooves in the longer block, letting them project just enough to fit the notches in the shanks, already spoken of. Now fix the blocks firmly together with the awls in place, and we have the "head-block."

Now take two pieces of board, 7 in. wide and 6 in. long, and cut a groove (¾ in. wide and ⅜ in. deep, and ½ in. from the edge) along the shorter edge of each. These standards are to be firmly nailed (with grooves to the front and facing each other) to the bottom-board, which should project 2 or 3 inches in front of them. This bottom-board is 2 or 2½ ft. long, and wide enough so that, when the standards are nailed on, the ends of the head-block will just slip into the grooves. Before nailing the standards on, cut a notch in the lower front corner of each, 1½ in. high, and reaching back across the groove, and bore a ⅜-in. hole 5 in. from the bottom, and 5½ in. from the front side. The frames are to be slipped over the bottom-board, the top-bars coming into the notches in the standards. Set a 1½-in. screw into the back side of each notch; slip on a frame, and adjust the screws so that the awls shall be over the center of the top-bar. Take a 2-inch strip, slightly thicker than your top-bars, and fasten it to the bottom-board just back of the frame when on, and fasten a strip (1½ in. thick) over this, and projecting over the top-bar. The awls work through this strip, which serves to prevent the frames from rising when the head-block is raised. There must be a clear space of ⅞ in. between strips and standards.

Take a board about 16 in. long and 1½ in. narrower than the distance between the standards, and nail a ¾-in. strip on each edge of it, letting them project 2¾ in. beyond the end of the board. Nail a narrow strip about ⅜ in. thick across one side of this board, 6 in. from the ends of the projecting strips, for a fulcrum, and, placing it on the bottom-board so that the points project ⅝ in. under the head-block, nail a thin strip across the bottom-board on each side of the fulcrum, to keep it in place. Finally, take a board about 3 feet long, and wide enough to fill the space between the standards; bore a ⅜-in. hole, 2 or 3 in. deep, in each edge, 10 in. from the back end; nail a small rounded strip across the under side 5 inches in front of the holes, and work down the front end for a handle. This lever is coupled to the standards by slipping pieces of ⅜ iron rod, or bolts with the nuts off, through the holes in the standards and into the holes in the lever.

Now for business: Screw the bottom-board to a work-bench so that the front end projects from the edge. Slip on a frame with the left hand, and depress the lever smartly with the right, thus sending the awls right through the top-bar, and raising the back end of the lower lever. The levers being wide and stiff, raise and lower the ends of the head-block alike. Knots in top and bottom bars should be avoided. The machine should be adjusted by blocks or screw-heads so that the frames slip on just right, and the awls descend just far enough. If preferred, the holes may be punched before the frames are put together.

My machine cost only 35 cents, and about two hours' work one morning; and before noon it saved me two or three days' work over the old way. At first I did not notch the awls, depending on the grip of the blocks to hold them; but the first time the head-block was raised, two or three awls stuck fast in the top-bar. I then notched them, as I have directed, and have punched about 1500 frames without any trouble. **F. B. Chapman.**

Scipioville, N. Y., Sept. 14, 1881.

Your ability to devise ways and means for making tools cheaply is considerable, friend C.; but I fear most of our friends will find it a pretty good day's work to make such a machine, even if the materials do not cost more than you say. We first pierced our bars with a similar machine, to be worked by foot power, but we broke so many awls we afterward made a gang of drills to do the work. We did not draw the temper, as you suggest, and I think likely this would make quite a difference. With the gang of drills we can pierce several bars at once, and hard or knotty places make no difference.

RASPBERRIES FOR BEES.

I MAILED you this morning a few clusters of blossoms from a seedling raspberry that we have. For bee-keepers it far surpasses the Cuthbert, as it gives two crops each year. If very dry, the last crop is not very large, but is of excellent flavor, and, no matter how dry, the bushes are loaded twice each year with clusters of blossoms that will keep the bees busy. We are now in the most protracted drought we ever experienced, yet our bees are working away on them as merrily as though it were June. You will see by clusters sent you how bushes are loaded, and I did not pick out the largest by any means, but took them just as they came. The berry will not average quite as large as the Cuthbert; drops from the bunch easier, and is so soft as to be unfit for a market berry, but for home use can not be surpassed, with us at least; and as you get two crops per year, I think it will pay better, especially for those who want them for pasturage for bees, than any other berry we know of. We have not the time nor inclination to introduce the berry and make money out of it, so I will make this offer: If you or any of your subscribers want any of the plants to try, I will send you some at but little above what it will cost for postage, moss, and oiled paper. Postage on a good strong plant will not vary much from 1½c. Now, do you think it will be too much to ask 2c each by mail, postpaid, or 100 by express for $1.00? If you do, I will try to furnish for a little less. **F. L. Wright.**

Plainfield, Mich.

The samples sent seem very full of blossoms, and fruit in different stages; and it would almost seem as if it were June to look at them. I have often heard of ever-bearing raspberries, but had the impression that they were never much of a success practically. I know there are wild raspberries in Michigan that bear crops in the fall, for I have seen them; but I do not feel so sure the same plants would bear two crops further south. How is it, ye small-fruit men? I should think your price was certainly low enough, friend W.

GRAPE SUGAR FOR WINTER FOOD.

FRIEND McCORD'S EXPERIENCE.

I PROMISED last fall to give you the result in the spring of my experiments in feeding grape and cane sugar mixed, for winter. I intended to report in the spring, but perhaps it is better that I have delayed it until now, as it has allowed me time to cool down a little. Now is the time to think about feeding for winter, and finding the losses so so heavy everywhere and under almost all circumstances, I scarcely knew what to say, but I suppose nearly all bee-keepers, like myself, except beginners, have their own way in all their manipulations, and think it the best. I have my own way, which appears to suit my limited ideas; my own kinds of feeders for fall and spring, which I prefer to any others, and they cost me nothing. My own queen-shipping cages, which I am content to use exclusively; my own method of hiving without cutting limbs off, and my own way of wintering, with the very best results. I use none but the L. hive, Root chaff hive, and the Langstroth and McCord Twin chaff hive, and standard size L. frames, and never lost a colony until last winter, and then I lost 25, out of 60, and it was the first time I ever fed grape sugar in the fall. I fed the following mixture to every hive I lost, except two, and one of them, the strongest colony I had, starved, and the other one I attempted to winter with the second story on; but after consuming all in it they starved and froze in attempting to reach the stores below, which were abundant; but the weather being extremely cold, and so much space upward, the heat rose to the top as fast as generated, and they all died, clustered together almost within reach of plenty.

But, to the feed: I took 4 lbs. white coffee sugar and 1 quart water, 4 lbs. of grape sugar, and one pint water, mixed and heated both separately, to a syrup, then mixed in the proportion of two quarts grape to one quart cane syrup, and fed in my pans as usual. I believe it would do very well, if the bees could fly every week or two at furthest; but such winters we do not often have, and therefore I am satisfied that any mixture containing grape sugar in any proportion is very unsafe for winter feeding. There is so much starch body in the grape sugar that must be discharged often as fæces, while a much larger proportion of cane sugar will evaporate through the body of the bee, as insensible perspiration, which enables the bee to retain its fæces through a long hard winter, without having what some call dysentery. Last winter put grape sugar to a very severe test; it hardened in the cells, and I lost every colony that I fed it to, and most of them left their hives and combs in a fearfully filthy condition; but by scraping and washing, I restored them to a pretty good condition. I believe, had I not feed any grape sugar, some of the weakest colonies would have gone under (but not so many), for some were not strong enough in the fall to survive such a winter as last. I saved one queen and small remnant of her colony, that were literally plastered and daubed all over and stuck fast, by dumping or scraping them into a pan of warm water, and stirring them with a stick until washed clean, then drying them on a board by the stove, and returning them to a warm clean hive and fresh clean combs.

Oxford, O. Sept., 1881. D. A. McCORD.

CAPABILITIES OF BEES.

BEFORE entering upon this subject, I wish to say that what a colony of bees are capable of doing under favorable conditions is no criterion of what we may expect many colonies to average. It is not a large yield of surplus honey from one or two or three colonies that constitutes a season's success, but a good *average* yield from the whole apiary. From 1871 to 1875 inclusive, we had good seasons for surplus-honey gathering. Basswood yielded bountifully *every year*, and while our average yield was large, I will detail a few exceptional cases, exemplifying the wonderful "capabilities of bees" under conditions, all of which we hardly understand.

During the basswood flow in July, 1872, I hived an ordinary prime swarm on to 10 Langstroth combs. Five or six days after being hived, I extracted the brood-chamber clean, and took out about 50 lbs. of honey. At precisely the same time the next day, I emptied it clean again and got 30 lbs. of a fair quality of unripe honey.

When Mr. Hosmer, of Minnesota, reported 53 lbs. in one day, I had reason to believe it; but when one of our gushing bee-keepers came right out afterward with 60 lbs., I thought it looked slightly "fishy."

I have extracted 12 lbs. per day from buckwheat alone. I had one colony of black bees in 1873 that gave me 410 lbs. surplus honey, 48 of which was comb, all the rest extracted, of good quality. During 1871 I had one colony of bees give me 160 lbs. of surplus comb, and come outside and build comb and fill it with honey under the bottom-board, which stood high from the ground.

In the spring of 1873 or '74 I bought 2 colonies of a neighbor, in 9-frame L. hives, for $20.00, and I sold the surplus that they gathered within a space of two weeks (during basswood bloom) for $120.00. It is just to say that the honey was all extracted, and bottled and sold at fancy prices—some of it averaging as high as 32c per lb. All the colonies referred to were black, and none were aided by others.

But, a few big hills don't make a world, nor do these unaccountable yields of a few exceptional colonies make a fortune for their owner. They make food for thought and study. Other stocks, standing by their side, gave little or no surplus. Still others, full of bees, and in every way equal to the first-named, as far as the master could determine, gave only one-fourth or one-half the surplus. These differences, during the same flow, can be accounted for only by constitutional differences in the make-up of the individuals of the colony. Whether we can *see* these differences or not, we can plainly see and realize the results; and all we have to do is to encourage it, by breeding from those stocks that possess it. I may say that I *know* that such a course proves satisfactory. Remember, these results were all given us by a race of bees entirely neglected by the hand of science. That the black bee possesses many valuable points of superiority over any other race, it is folly to deny. If any *one* hive possessed all the merits, all would have adopted it long ago; if either the black or yellow race of bees had been in *every way* superior to the other, there never would have been long and earnest controversies regarding which is the better one to adopt. When two things each possess a complicated mixture of the good and bad, then it is that extended experience is needed to wisely say which, all things considered, is the better of the two.

But there is scarcely a vegetable or animal now under the control of man, that he has been satisfied to use in the form or possession of qualities as he adopted it. "Better and better" has been the cry, and better and better have we made it.

Let the history of all the improvements of the past be repeated in the future by the progressive bee-keepers of America till "*Apis Americana*" shall be eagerly sought for by all the bee-keeping world as the *best*. JAMES HEDDON.

Dowagiac, Mich., Sept. 15, 1881.

A FEW ITEMS.

QUEENS WHOSE DAUGHTERS ALL PRODUCE THREE-BANDED BEES.

ON page 424 of September GLEANINGS, W. Z. Hutchinson asks Doolittle a question about those queens whose brood will produce queens that will produce all three-banded workers, whether said queens mate with black or Italian drones. As a reply, I would refer friend H. to page 132 of vol. 2 of GLEANINGS, where I write of a queen I had of A. I. Root: "I have raised 60 queens the past season, and each one is a duplicate of its mother, and not one of them produces a black bee, with thousands of black and hybrid drones around." Again, on page 50, vol. 3, GLEANINGS, I wrote: "The first Italian queen I ever saw was introduced some time in July, and did not raise a drone that season; neither was there an Italian drone within 12 miles of her; yet none of her daughters ever produced a black bee. There were hundreds of queens raised from her during 3 years, yet none of them ever produced a black bee." Also, if I am correct, Mr. Langstroth and E. Gallup both had queens known to have mated black drones, which never produced any thing but three-banded bees. Now, friend H., these are facts; but how it is, I do not know. I claim the Italian bee is only a "thoroughbred," and not a fixed race of bees. It is said that a cross of the black bee with the Egyptian, will, in three generations, produce a bee which no man can tell from the best Italian. If this is so, it is probably the starting point of our Italians; but why such breeding can so thoroughly fix the bands, that a queen mating with a common drone will not show such mating in her working progeny, is more than I can tell, but know such to be a fact.

A friend receiving a queen from me which chanced to have a few 4-banded workers sent with her, claimed, after reading friend H.'s article, that if all the bees produced by said queen were not 4-banded, she must have mated a hybrid or a black drone, and really talked *damages* if she did not do it. Now, this argument will not hold good; for some of those queens reared from the first Italian queen I ever saw, produced 4-banded bees, and certainly these queens must have mated black drones. The matter of *bands* is not so great as the *honey-producing qualities* of bees; and if our breeders would pay more attention to this, the world would be better for it.

BROOD BY CHRISTMAS.

On page 428, September GLEANINGS, I see our lengthy friend tells us that, on the first of January, he took 8 colonies from different parts of the cellar, and that every one of the 8 had "two and three frames of sealed brood, and young bees hatching." I turn back to page 14 of vol. 5, of GLEANINGS, and there I find that A. I. Root did not believe that bees commenced to rear brood as early as Christmas, although Mr. Quinby told us they did, and Doolittle, after several experiments, proved Quinby correct, and so wrote. Now, here comes a man who writes his first article for publication, and in it tells us of brood-rearing commencing at least two weeks earlier than Christmas, and A. I. Root passes it without comment. This man also says, that the greater part of that written by our old writers "does not amount to the paper it is written on," as regards wintering bees, and still Novice makes no comments on *that*, unless it is to say, "May the Lord bless you." I think, when a man casts a shadow on such men as L. L. Langstroth, L. C. Root, Prof. Cook, and hosts of others, and says that what they write is "bosh and trash," it would be well to chide him a little, even if he *does* come from the A B C class.

TAKING SECTIONS FROM BEES.

On page 438, September GLEANINGS, I find these words: "How do you get your sections of honey without having the cappings gnawed by bees filling themselves?" and the editor says he don't know, "unless you open the hive very quickly and scramble for the filled sections before the bees get the cells open." This gnawing of the capping in the fall of the year, or at any time when there is a scarcity of honey, when taking off comb honey, used to be a great annoyance to me, and "scramble" as lively as I could, if there was much on the hive, the bees would always make the combs look bad by puncturing the cappings to fill themselves with honey. Of late, however, I have taken off the board that closes up the outside sections, and blown smoke in the holes which the bees always leave in the corners of the sections for a passage way for themselves. Blow in considerable smoke, and as soon as the bees have mostly run off the first sections, remove them, and you will find that scarcely a bee remained on the second tier; blow in more smoke at the top holes of these also, and then take them. Then serve the next the same, and so on till all are off, and you will find that the bees will run down before filling themselves at all. As the smoke comes from above and through their passage ways, their first instinct is to scamper below, and down they go, leaving the honey clear. But you must be spry, for if you linger till they come back, they will then fill themselves in spite of your smoke. With hybrid or black bees, I have taken off 30 to 40 lbs. with scarcely a bee on the sections, in this way; but the Italians don't drive as well, neither will they gnaw the combs as bad. However, the Italians can be mostly driven in the same way. G. M. DOOLITTLE.

Borodino, N. Y., Sept. 19, 1881.

I am well aware that we often have queens whose daughters produce *no black bees*, but I do not know that I ever owned one whose daughters produced no two-banded or hybrid bees, though I have often thought of the cases friend D. mentions. What a prize such a queen would be for the dollar-queen business! Why, we could sell every queen for tested, without even trying them; for if the workers are all three-banded, we all rest satisfied. No wonder friend Hutchinson asks how, then, shall we know which are pure? I might say, rely on imported stock; but quite a number of the brothers declare the bees in Italy have a taint of black blood; and if this is the case, we shall have to give it up, sure. So far as I am concerned, I should not care for the yellow bands at all, if the bees were gentle and good honey-gatherers. I want them yellow-banded when I buy them to sell, because our customers would hardly be pleased with them otherwise, and I do not know but the yellow bands are the best test we have, as yet, of purity.

Aren't you a little hasty in your criticisms, friend D.? I confess I felt somewhat astonished to hear I had ever said I did not believe bees commenced to rear brood before Christmas. Here is all I find on page 14, vol. 5:—

> Doolittle thinks a good colony will commence rearing brood by Christmas, but Hill puts it at February. We are inclined to agree with the latter, although winters like last, they may rear brood nearly all winter.

I did not comment on the statement of our new friend, because I did not think it strange or wonderful. In my greenhouse experiments I proved clearly that bees could be made to rear brood during any month in the year. With the new Holy-Lands and Cyprians, the problem seems to be to prevent them rearing brood, even one *week* in the year. Neither did I understand our young friend to mean to cast any reflections on our old standard writers. I thought he would probably get some of his youthful enthusiasm toned down a little, and hence the chiding of my closing sentence.

Ladies' Department.

YOU know I told you I was a novice—just began with one swarm, and am 66 years old; rather old for a beginner. Well, I have today five hives full of bees; three natural swarms. I feel rather proud of my success, and *very* thankful. My bees would not work in the sections, but filled the frames full below. Some of the new foundation was filled with pure honey, so heavy I had to use both hands to handle it.

Will bees fill sections just as well if placed below? I find it hard work, and very troublesome, to lift off the sections above, and the bees pour over so, and get so mad. MRS. JAMES MORROW.

Vermillion, D. T., Aug. 22, 1881.

If your bees prefer to work in the lower story, and you prefer to get the honey out of the lower story, by all means use side-storing boxes, my friend. When you speak of the bees pouring over so, it makes me think you have been trying to work without a smoker, or that you tried to take away honey when they were gathering none. When honey is being gathered I use no smoker, and they don't pour out either. May be you have got hybrids withal.

I will give you a few notes on my success as a beekeeper. I went into winter-quarters with two strong colonies of Italians in Langstroth hives. Kept them in the cellar about six weeks, or until the middle of December, then put them on their summer stands, and they came out all right in the spring. I have increased to 10 colonies, and have taken about 250 lbs. of as nice honey as you ever saw; will extract again next week. The cleome, or Rocky-Mountain plant, is still yielding a good supply of honey. There are acres and acres of it in this county. Will you take me into your A B C class?

MRS. A. L. PEABODY.

Denver, Col., Sept. 6, 1881.

Most gladly, my friend; and as our Ladies' Department does not seem very full of late, we are especially glad to give you a hearty welcome. We are very glad to hear from our old friend, the Rocky-Mountain bee-plant, in its native soil. I should think it a rare treat to see acres of it. It must be a beautiful sight, judging from our Spider-plant field.

COLORADO.

You may have heard from this section of Colorado, although I think not, as no one in the valley has bees.

The altitude here is 7500 feet above sea level. There is bloom here for feed from six to seven months in the year. Red clover grows here wild. Catnip, peas, and buckwheat, can be cultivated here, and the Rocky-Mountain bee-plant grows, acres and acres of it, wild. Some wild buckwheat grows here late in the fall, that is so sweet you can smell honey from it. There is a great amount of wild strawberries grow here. Mustard and artichokes and sunflowers will grow here wild; forget-me-nots are plenty in early summer, and all summer long there are lots of wild flowers, mostly yellow and white.

We live four miles from the mountains, on a large brook; there are no trees down here, but they can be planted with success; that is, any kind that are adapted to the climate.

We have nice gardens here, and are commencing to raise small fruit; and next year will try early corn for green corn. We farm a whole section, and so you can judge we need nothing for exercise or employment, unless it pays back pretty well for every hour of care.

We have received, and been reading your A B C book, and feel very much interested, and think of trying two or three colonies by way of experimenting.

Please tell us if you think all things favorable.

Do you think it a favorable business for women, and are they usually as successful as men? Please answer this particularly, and how small a capital can any one possibly start on.

MRS. FRANK S. ROFF.

Rosita, Custer Co., Col., Sept. 12, 1881.

I can not see any thing lacking, from your description, my friend, but, on the contrary, the picture you draw makes one feel as if he would really like to live there, even if you *are* a trifle "away up high." Let us hear from you further after you get started. Our back Nos. and vols. will answer about the business being adapted for women, and your capital may be anywhere from one hive of bees up; better small, perhaps, than otherwise.

Juvenile Department.

I AM a little girl 12 years old. My pa keeps bees; we went into winter-quarters last fall with 9 stands of bees. We came out this spring with 7—2 weak ones and 5 strong, and the 2 weak ones died. The 5 strong ones swarmed 15 times. My pa gave me a swarm last summer, and he bought a yellow queen from you and put it in with my black bees, and she stayed in only 4½ days, and she led off with a swarm of bees, and I have two stands of bees now. We use the Simplicity hive. Our neighbor, Mr. John Farren, had 16 stands of bees last fall, and came out this spring with 4 stands.

My pa takes Gleanings; we could not do without it. He gets some very good ideas out of it. I like to read it. Pa has one of your smokers. I attend Sunday-school. **Julia Bannon.**

Well, that is a first-rate letter, Julia; but we have puzzled our brains in vain to tell where to send the book, for you see you haven't told where you live, at all. The postmark on the envelope has a little resemblance to Pennsylvania, and the girls were going into a long hunt to find you, until I stopped them. Now, when you see this, you will take a postal card, won't you, and tell us real plainly what town, county, and State, you live in? I am glad the yellow queen did not go off—aren't you? Are her bees yellow now too?

In 1879, my pa bought one colony of bees in the old-fashioned box hive; they swarmed three times, and pa, not knowing any better, smoked two of them with sulphur, and took out the honey and buried the bees. Pa put the other two in the corn-crib, and wintered them all right. We stayed home all the next summer, and watched them, and they never swarmed, and we were quite provoked; so pa said there must be some different way of managing bees than that. In the fall he bought 12 more colonies at $4.00 each, then making 14 in all; he transferred two of them, and put them into hives 19 inches long, 15 inches deep, and 12½ inches wide. We put them in a good warm stable on the north side of the barn. About the first of January, pa found three of them that needed feeding. We brought them in the house, and found one of them dead; the other two being weak, he thought he would put them in the cellar to keep them warmer; but the cellar being too damp, the comb molded and the bees died. About the first of April we put them out on a plank, all close together. In a few days there was a heavy snow-storm, and when it began to get warmer the bees flew out and fell on the snow and died; so pa scattered straw on the snow for about ten feet out in front of the hives, and stopped the holes up with straw, so that the bees could not get out; but he gave them plenty of air. Last year pa gave a neighbor one dollar if he would show him how to transfer them. This spring, about the first of May, we transferred the 11 that were left, and then bee-keeping began in earnest. The next day after transferring, pa bought two more colonies. By taking from the strong ones, and adding to the weak ones, by the middle of May they were all quite strong. By keeping the queen at work, he got them so strong that he had to buy 12 Italian queens, and divide them up. We have now one Holy-Land, 2 Cyprians, 17 Italians, 4 hybrids, and 24 blacks. Pa's share of the bees is ten-thirteenths; my brother Clarence's share is one-thirteenth, and my share is two-thirteenths. Pa makes all of his own hives, and my 9-year-old brother and I make the racks and paint the hives. We expect to get 1300 lbs. of honey this year. We have got 1200 lbs. up to date. I have two brothers and two sisters; one brother is two weeks old, and the other one is nine years old; my youngest sister has blue eyes. I would like a picture of your Blue Eyes, and give you a picture of my Blue Eyes. I live in a country place, and I am 11 years old, and go to Sunday-school and day school. I read in the fourth book, and study arithmetic, geography, grammar, and algebra. Pa has been taking Gleanings and the *A. B. J.* for about 3 months, and we like them very well. My brother and I are going to Toronto next week with pa, to attend the fair and bee-keepers' convention. **H. Francis Cook.**

Atherton, Norfolk Co., Ont., Sept. 6, 1881.

Well, I declare, friend Francis, I shall have a pretty good opinion of you Canadians after a while. You know our boy John is from Canada, and here you are, only 11, owning a share in an apiary, going to fairs and bee conventions, and writing good long letters to a bee journal. Now, while I think of it, I want to put in a plea for the juveniles at our conventions. If any are present they are to be allowed to speak, in place of some of the men who make such long speeches. I am a little afraid you have not been taking just the right course in wintering; but with the bees you have now on hand, you will likely find out what is best in the matter. The pictures of Blue Eyes are all gone; won't the one in the A B C do? I should be very glad to see the picture of *your* "Blue Eyes."

My father has kept bees 17 years. The first swarm he had he found in a hollow tree on the bank of the river; he sawed the tree off on both sides of the nest, and put a pole into the hole of the log, and tied a rope to each end of it, and hung it on the back of the wagon, then hauled it home. He left them in the log a short time, and then drove them into a hive. He has now about 200 swarms from that one. In swarming time I watch to see where they alight. This summer I got 10 cents for every swarm I saw, and earned a gold breastpin, and still have some money left. My father don't use tobacco in any form, nor whisky either. **Eva Amery.**

St. Croix Falls, Polk Co., Wis., Sept. 3, 1881.

Well done for you, friend Eva. So you have bought every thing you need—at least I suppose so, and have money left. I had made up my mind that your father was a good man, before you told that last line, and now it seems to me you can thank God for having given you so good a father. Pretty well done, for the bees that came out of that one old tree.

I am a girl six years old. I go to school every day, and I have a different lesson every class. I have no brothers nor sisters. All the other little girls were printing letters, so I thought I would print one too. I often write letters to my grandma. My pa takes GLEANINGS, and I like to hear about friend M. and his neighbors. My pa got a queen two or three weeks ago, and the bees killed it. I am not afraid of bees, for I have one hive of my own. I was a long time printing this. I go to Sunday-school. My grandfather at Mt. Carroll, Ill., has one hundred stands of bees. ADA BERYL DARRAH.

Chenoa, McLean Co., Ill., Sept. 10, 1881.

Well, I don't wonder you were a long time printing your letter, my "little friend," for it is done very nicely indeed for a little girl only six years old. What do you think of Mr. Merrybanks this month? Don't you think you would have laughed too, if you had been there when he tipped over backward on the buggy seat?

I am a girl nine years old, and like to read your GLEANINGS ever so much. Mother has not any bees now; she thought they were dead, and brought them into the sitting-room, and fixed a feeder on top, and in the night she heard an awful buzzing; they were swarming, out in the sitting-room, and she shut the bedroom door, for she thought they would swarm us out too. They got out of a little hole in the feeder. Mother says she wants to get some more. She promised me a swarm, and her bees died, and she did not have any to give me. ADDIE E. OSBORN.

Brimfield, Ind., May 17, 1881.

Well, now, that was sad, was it not, Addie? Tell your mother, when she undertakes to fasten bees in or out of a hive, she will have to look sharp. A good many of us have "come to grief" when we *thought* a bee could not get out nor in. I hope both you and your mother will have better success next time.

This is the first letter I have ever written, though I am thirteen years old. I have three sisters and one brother. Father has kept bees for thirteen years, and the most that he ever owned at a time was 17 colonies. Last fall he had 5, but lost 2 last winter. Sometimes they sting him, but he don't mind that much, for he likes bees, and calls them "little pets." Sometimes they swarm when he is not at home; then we have to hive them. One time, when father and mother had gone to town, they came out, and we children had to hive them; and when pa came home they came out and went back into the old hive. This is the fourth year that father has taken GLEANINGS. FLORENCE G. PECK.

Jackson, Mich., May 20, 1881.

Very good, Florence. So your father has kept bees just as many years as you are old. You must not be discouraged, even if the bees "you children" hived did not stay; they often "don't stay," even for old hands at the business.

I am a boy 14 years old. I have 8 hives of bees; they are all in box hives; I had a good many young swarms get away from me this year. I live at an old steamboat landing called Newport, on the Trinity River; the nearest town is Riverside, on the I. & G. N. R. R., which is my postoffice. This is a good country for honey. I have never known bees to fail to make plenty. My bees are all common. I have taken as much as 35 lbs. of comb honey at one time out of a single hive. The bees get a good deal of honey from the willow-trees on the banks of the river. I want to get me some good hives for my bees next year. I wish you would please tell me the best hive for comb honey. I take GLEANINGS, and I like to read it very much. I have four brothers and one sister. I am the youngest boy. My father is dead; he died when I was 4 years old. I like bees very much. Bees always winter well here. Last winter was the worst I ever saw. I never lost a hive. I don't put my bees in any house. I just leave them out in the yard. JEFF. D. WERNER.

Riverside, Walker Co., Tex., Sept. 14, 1881.

Pretty good, friend Jeff. Since you speak of it, it seems to me *I* would like very well to live where bees would *always* winter. I really do not know that I can tell you what hive is best for comb honey, but I rather think the chaff hive has given as many good reports as any, in the hands of all kinds of people. The orders for them now are larger than they have ever been before. I rather think we shall "just leave" our bees "out in the yard" too, this winter.

LETTER FROM A SIX-YEAR-OLD LITTLE GIRL.

SEND ME A TOY PIANO. I HAVE A SWARM OF BEES. THEY MADE ONE BOX OF HONEY, AND HAVE NEARLY MADE ANOTHER. I AM SIX YEARS OLD. MY NAME IS

EMILY MOSELY.

Mr. Root:—My little girl has written to you to send her a toy piano. She has never been taught to write or to read. I taught her her A B C's, and she has taught herself to read in easy lessons; and when she wishes to write she prints. E. J. MOSELY.

Oyster Creek, Texas, August 9, 1881.

Well, now, Emily, that is first rate. The letter is plain, and to the point; and the way in which you tell a great deal in a very few words, would make a good lesson for a great many of us who are five or ten times as old as you are. I guess you must have a pretty good father or mother—may be both. Have I guessed rightly?

I am a little boy 10 years old, and go to school. I have got one hive of bees. My stepfather, G. Phillips, has 2 colonies. He told me if I wanted to save all of my pennies I could buy me a hive of bees, so I went and picked strawberries, and got money, and sent to Dan White, of New London, Ohio, for a nucleus. The bees did not come, so I got discouraged; told my stepfather my money was lost; he said no, and told me that I could have one of his, and he would take my chances. The money came back all right, and I own the best colony of hybrid bees in this town. They sting hard, though. I would rather it would be you to handle them than me. My stepfather takes charge of them for me. I shall soon learn, I hope. He takes GLEANINGS, which he is very fond of. Ma calls him her bee-man, he is so fond of bees. I send you some fireweed seed, buds, and leaves, mentioned in some back number of GLEANINGS. There is one acre or more growing near our house. It is roaring with bees from morning till night, and the seeds are flying like a swarm of bees past our door as I write this letter. The honey is nice, but not as good as basswood. The forest is full of basswood here, and a good place for bees; only 5 colonies near here for several miles that we know of. JOSEPH MONICA.

Romeo, Marathon Co., Wis., Aug. 28, 1881.

Well done, friend Joseph. It speaks well for you that you are on such good terms with your stepfather; and if you can handle those hybrids, you will probably have no trouble when you get to the pure Italians. I am glad, also, to see one of your age so observant. Make the most of that field of fireweed, and don't be hasty in condemning those to whom you send orders. We could have told you that you money was perfectly safe with our old friend Dan White.

MRS. LUCINDA HARRISON TO THE JUVENILES.

I've just finished reading the Juvenile Department, and am pleased that so many boys and girls are interested in bees. I had so much talking to do in August, that I could not write to you for the September GLEANINGS. I was in Vermont, visiting a brother who had been a missionary in Turkey for 27 years, and who came back to this country on account of poor health. As he was not a bee-keeper, he did not know much about the bees there, and remarked that the honey they bought in Turkey was not as white and nice as that seen in America. Do you not think the Turkish bees are as neat as ours? They are striped, and are probably Italians; but then they have such funny houses to live in, that I suppose that has something to do with their honey not being any whiter.

If you would ride up to some of these Turkish villages, you would think it was a field of potato pits; but if you entered one of these houses that are constructed underground, you would find a great large place that had been built many hundred years, and a queer family living there, consisting of donkeys, cattle, sheep, and fowls, and I almost forgot to say, men, women, and children. They build under ground to keep warm, as there is little wood in that country. There is plenty of coal, but none of the mines have ever been worked, for the government does not mind its own business, but meddles and prevents people from working, just as it did when the walls of Jerusalem were rebuilding.

The people must have a fire to cook, so in warm weather they take the manure that the cattle have made, and the women roll up their loose trowsers, and work it up with their feet, and make it into cakes, drying them in the sun. They fence off one corner in their underground houses with a light railing for the people, and sink a big jar down in the floor, to burn these cakes in. At night in winter, when the fire is burned down low, they cover up the top, and lie with their feet on it to keep warm; and when the fire is out, they let their legs hang down in the warm jar.

The bee-hives are made out of manure, by working it up and forming cylinders, which are dried in the sun, and have a few cross-sticks in them. They have to be kept out of the rain, for if they get wet, the poor bees would be in a sad plight. Do you wonder, now, why the honey is not as nice as ours? MRS. L. HARRISON.

Peoria, Ill., Sept. 9, 1881.

The "Growlery."

This department is to be kept for the benefit of those who are dissatisfied; and when anything is amiss, I hope you will "talk right out." As a rule, we will omit names and addresses, to avoid being too personal.

AS for me renewing my subscription, I don't think I will, my time having expired. While I have been reading GLEANINGS it struck me a good many times that you wrote one thing and practiced another, especially in one case; that in regard to my boys. They wrote to you for advice as to what they would require. They had saved their spending money, and had taken a notion to bees. They wrote they had never kept bees. Then was the time you should have dropped a postal, saying they would be risky property, unless in the hands of an expert. I tried as you wrote, to give them some brood; all had box hives. One man in Philadelphia I saw, said he would not open his hives to take a frame of brood out for $10.00 at that time of year, as it would be almost sure death to them.

I got a pipe and tobacco last week; first time I ever smoked a pipe in my life. I declare if it did not make me sick a good deal more than bees. The boys had a good hearty laugh. I said it was the first time, and would be last. Willie says, "Now, father, for a smoker from Root; it will be all we shall ever get from him." I said no. I did not think I was entitled to one, as I was not an old smoker. I was afraid a number might tell stories to get smokers from you, and would not return money if they began again; but certainly it must have done a deal of good to break so many from the evil habit, which I think leads to a desire for strong drink in many cases. I hope that what my boys saw of me smoking may be a lesson to them as long as they live, sufficient to repay both me and them without getting a free smoker. JOHN EARNSHAW.

Germantown, Pa., Aug. 16, 1881.

Now I must really protest, friend E., against some of your strictures. Is it not a little unkind and uncharitable to intimate that I necessarily had a selfish motive in view, because I did not discourage the boys from going into bee culture? If your boys went to the store to buy matches, would it be the duty of the clerk to discourage the purchase, because matches are often dangerous things in the hands of boys? Do all boys turn out badly with bees? See the Juvenile Department, and other letters in this and other numbers. Have we not every month a "Blasted Hopes" department, on purpose to have every one fairly warned of the risks of bee culture? I do not think I either discouraged or encouraged; for with my busy cares, I can only treat your boys as I do all others, in a general way. About all I can do is to hand new comers the sample copy and price list, and leave them to draw their own deductions.—I can not say I very much admire your plan of enforcing good morals on your boys, by object lessons, when it goes into tobacco, as you did. Notwithstanding, I am glad you sent me the money for a smoker, and did not claim one for breaking off. We are good friends, any way, are we not, friend E.?

FRIEND HUNT'S ADAMS' HORSE-POWER.

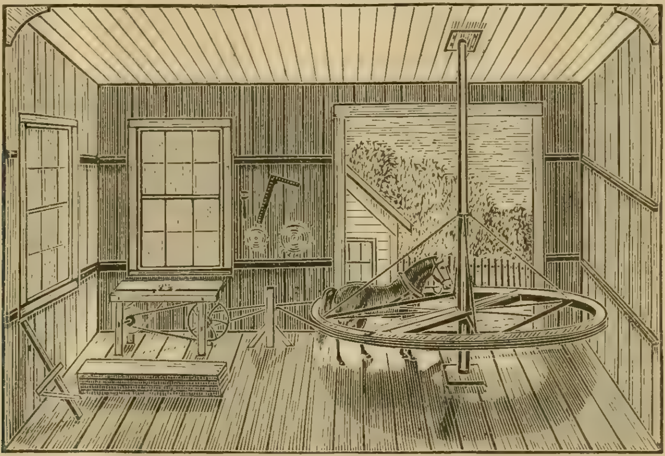
(SEE MENTION OF IT ON PAGE 405.)

I RECEIVED your postal, asking for a description of my Adams' horse-power. Now, had you asked me for a description of the new minister, or of my wife's last new bonnet, I think I could give it you; but that horse-power is a "sticker." Any person wishing to make one had better get a cut of it. It would help more than any thing I can write. However, I will give the few changes I have made in it—I think for the better.

Instead of a rope, I use a chain made of ¼-inch iron. I also place my pulleys, that give the chain a half-turn, side by side instead of one above the other, as I could not make them work that way. The rim is worked out 6 inches wide; that is, the upper and lower pieces; the center-piece is 4½ in. wide, which you see leaves a groove for chain 1½ in. deep. The upper and lower pieces are, or should be, 1¼ in. thick, and center-piece ⅞. The rim should be bolted and nailed very securely. On the end of the guys that support the rim, put about a foot of chain, so as to raise or lower to suit. Make the wheel not less than 15 ft. in diameter; and even this size is hard on a horse where you have much to do. The post for center is a piece of 4 x 4 scantling, with stubs from an old axle in each end. The lower one works in an old box of a wheel. It is not much of a job to make one; but should any of my bee-keeping friends attempt it and get puzzled, let them drop me a postal and I will help them all I can. If this is not a sufficient description of it, let me know, and I will try again.

M. H. HUNT.

Bell Branch, Mich., Aug. 27, 1881.



THE ADAMS HORSE-POWER APPLIED TO BEE-HIVE MAKING.

With the above we give the original cut which first turned friend Hunt's attention that way. You will observe that the especial feature of it is, that the horse travels inside the wheel, while the belt, or chain rather, goes in a groove in its circumference. To get the horse out, the rim is lifted a little, unhooked, and he steps out just like letting down a pair of bars. But little power is wasted in friction, because the horse pulls right on the chain, as it were, that runs your buzz-saw. If the wheel is kept painted, it may stand out doors all the time, your saws and machinery being securely housed, of course.

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SUCCESS NOT ALWAYS IN THE NUMBER OF COLONIES, ETC.

SOME articles in GLEANINGS from my friend Mellen, of Amboy (*on the Inlet*), are noticeable on account of the manner they portray the inherent modesty of the man. If friend Mellen should tell the readers of GLEANINGS just what he has done with bees in the last twenty years, undoubtedly nine out of every ten would class him with the author of "Blessed Bees." Keeping, as he does, only a few colonies, 25 or 30, he entirely throws some of us would-be large producers into the shade. With my 100 colonies this year, and 150 last, I would dislike to show receipts with him, for I am confident he could show more dollars from 22 or 23 colonies than I with my 100 or 150. Perhaps, friend Root, you could persuade him to give us a partial review of his career with bees for a number of years back.

Living only a few miles from him, I have studied the man some, and his manner of handling his bees more; and I have come to the conclusion, that his success can be told in one sentence—keeping his bees strong, and doing every thing that needs to be done, at the right time.

And now, friend Root, one word about queens, and I will let up. I, with perhaps a thousand others of your readers, have been in the habit of buying quite a number of queens every year from quite a number of different breeders, and have come to the conclusion there is as much difference in different strains of Italians as there is between Italians and blacks. I have one queen now that, if I had her where I could raise queens from her, and keep them pure, I think any bee-keeper would be satisfied with them, combining as they do so many good qualities with so few bad ones.

While I have this good queen and some of her progeny, I have other queens from other breeders that I do not consider any better than blacks; indeed, not as good as some strains of blacks.

I have a proposition to make, and then I am done: That all the prominent queen-breeders that lay claim to having superior strains of Italians, each send one queen to A. I. Root, that he shall put each one in a good colony; that next summer he shall report through GLEANINGS how they wintered, how they "springed," and which he considers the best queen, all things considered; and to pay to the winning queen-owner the price of all the queens sent him, provided no sender shall send an imported queen, or shall charge more than $2.00 for his queen. Now, Mr. Root, I have not proposed any thing I am not willing to enter into myself, although I do not make a claim to being a prominent queen-breeder.

Lee Center, Ill., Aug. 12, 1881. J. L. GRAY.

I hope our good friend Mellen will excuse us for talking so much behind his back, and if he will give us the report his neighbor hints at, we won't do so any more.—I am very much obliged, friend Gray, but I should go crazy, sure, if you put any such task as that on my shoulders. I would want a year or two on some isolated island to do it, and then I should not expect to get at more than a glimmering of the truth. I am much inclined, too, to think you would get good and bad queens from everyone's stock, and that likely one man's, on the average, would just about equal another's. We are all changing about so much all the time, I do not see where any great difference can be. Freshly imported stock seems to be an advantage; but with the poor facilities we have, any of us, for isolation, I confess I have but little faith in extra strains of bees. Our old red-clover queen promised pretty well, but still I could never be quite sure her bees did not steal their stores.

LETTER FROM FRIEND HARKNESS.

HOW HE AND HIS WIFE KEEP BEES IN PARTNERSHIP, ETC.

IT would be a pity to have your waste-paper basket remain empty the year round because all the letters you receive are "good enough to print." So I am going to write you a long letter, knowing that the more I write the more it will be worth when you sell it by the pound.

The ferocious-looking insect pictured at the top of this page is supposed to be a queen-bee. I don't know what kind of a one it is, for I never saw any thing that looked like it. Perhaps it is the Apis dorsata (that "stamps" his feet and shakes off the dew), or else the "big blue bee" that one of your correspondents inquired about. The line of writing under the picture was suggested by reading, in the July GLEANINGS, the "Department for those who forget to sign their names." I am very absent-minded, and for fear that I should get into that Department, or, rather, that some of my letters would, I thought best to print my name on my paper with the copygram. I suppose you would say "cheirograph;" but I like the name copygram better, as it is so much easier to spell. Of course, your word is the purest Greek, mine being a sort of hybrid, half Greek, half English; but as I am used to handling hybrids, I like it all the better for that.

I believe I have never told you much about our bees. I say *our* bees, because they belong to my wife and me in partnership.

I handle the bees and pocket the money;
She helps all she can, and we both eat the honey.

We began in May, 1879, with a single colony, which was a present from her father. It swarmed twice, and the three gave us about 75 lbs. box honey. We wintered them all and got from them last season six natural swarms and 225 lbs. of box and section honey. We wintered seven without losing any, and have this season had eleven natural swarms. I do not yet know how much honey we shall get this season, but probably not a large amount. As you know, I have just begun to learn my A B C's. I never saw an extractor till I made one about two weeks ago, my only guide being the pictures in your price list and GLEANINGS. But if we have not taken out much honey yet, we have had some natural swarms that I think are worth reporting. Our seven old colonies have each swarmed once, and four of them the second time. I weighed those seven first swarms very carefully and this is what they weighed:—

WEIGHT OF SWARMS.

11	Heaviest one, - -	11 lbs.	Average weight of 1, ...11 - —
7½	" two, - - -	18½ "	" " " 2,.....9 1-4
6½	" three, - -	25 "	" " " 3,.....8 1-3
6	" four, - - -	31 "	" " " 4,.....7 3-4
5½	" five, - -	36½ "	" " " 5,.....7 3-10
4½	" six, - - -	41 "	" " " 6,.....6 5-6
4	" seven, - -	45 "	" " " 7,.....6 3-7

My feeder ad. in GLEANINGS has begun to yield fruit, and I have already received and filled orders from people in five different States. The first order came from J. W. Shaffer, of Corydon, Wayne Co., Ia. I feel quite well acquainted with that gentleman, for his son Charley has told us, in the July GLEANINGS, page 325, all about his father's bees and his own.

It is sometimes hard to decipher the names of people who order feeders. I wish I had a printed copy of your subscription list, to find those names in. It would be a great help to those who wish to send circulars to live bee-keepers, as it would give the addresses of over 4000 of them. But I don't know that you could sell enough to pay you for printing them. Some time I will tell how we winter bees here in northern New York without losing any; but I have written enough for this time.

J. W. HARKNESS.

Keeseville, Essex Co., N. Y., Aug. 15, 1881.

EXPERIENCES IN BEE CULTURE DOWN SOUTH.

BY ONE WHO SPEAKS RIGHT OUT.

SOME five years ago I commenced bee culture. I knew nothing whatever of bees and their habits, except their stinging propensities. A friend (?) gave me a colony in a small soap-box; these were black bees. Like most beginners I felt that I wanted one hundred colonies at least, immediately, if not sooner. Soon after giving me the colony of blacks the same person proposed selling me a large colony of what he termed Italian bees. I bought them; they too were in a soap-box, but the colony was very strong. I have since learned that this colony was the worst class of hybrids, and cross is no term to apply to their temper. I have since found that this man sells hybrids for pure Italians, and sells the pure Italian for albino bees. The latter he tells people are a distinct class of bees, much finer and better than any other race. I have since found that the albino is merely a "sport" from the Italian, and, though fair to look on, their qualities as honey-gatherers are far below those of the blacks of darker strains of Italian bees. They appear to lack toughness too — something on the hot-house-plant order.

In the beginning I was greatly nonplused to know when, how, etc., the bees would swarm, but could not find any infallible signs in the books that would apply to the box hives. Finally I transferred my bees to the simplified Langstroth hive, put them on stands, and expected just a little "bigger" yield than I had read of friend Doolittle getting from those "crack" colonies of his. Alas for human expectations! I did not realize eight pounds of surplus honey to the hive. The next year I felt that I had not managed properly the first season, so I bought some fine queens; they were dollar queens too, and I fortunately got them introduced. Lo and behold! that season I got about 30 lbs. to my strongest stocks. Well, I applied myself the next season, reading the bee papers, studying the successful management of some, and the reverses of other bee-keepers. I would pore over the back numbers, reading often till ten o'clock at night. My wife would tell me, "Well, well, you have gotten the bee fever bad." The next season — that was last year — I took from my best colony 127 lbs. of honey in one-pound boxes, and which sold for over *twenty dollars*. That year I was trying to rear queens largely also, and, including nucleus hives and other larger, I realized over six dollars from each. I considered that a big improvement, especially as the old bee-keepers in the neighborhood told me that it was a tolerably poor season for honey, they thought.

I felt that the additional extra yield was brought about by close study and proper management; by doing the right thing at the right time. Close application and common sense, with a determination to succeed, finally accomplish wonders in bee-culture. A gentleman recently said to me, "Oh! there's no use for the bee papers to tell me those 'big yarns' about big yields and the millions of dollars in bee-keeping. I believe they are lying! Of course, it's to their interest to puff the business."

This gentleman was from an adjoining State, and had tried *five kinds of bee-hives* and failed signally with all. I told him of my success; he did not tell me *I* was lying (I stand 6 feet in my stockings, and weigh 185 pounds — ah!)

This year, getting an advantageous offer, I sold all my bees but a weak nucleus. I built this up to a strong colony. Yesterday I weighed surplus in upper story, and found 86 lbs. of honey. This colony has all of 40 lbs. in the lower story also.

Of course, there's nothing strange about this, supposing it had been a fine honey season; but it has been the poorest experienced in this locality for many years. I used fdn., of course. I know some extra strong colonies that started in strong with ten frames of comb; they haven't 5 lbs. of surplus today, and haven't swarmed either. Why is it that some have better "luck" in getting surplus honey from their bees? I think diligence and close application is the secret — if secret there be.

I am still wanting to do better — get larger yields. Tell friend Doolittle to look out; I shall keep trying every year to learn some thing new in the business until I can "get as much," if not just "a little more," than he has, of surplus honey from one colony. That will be a happy day for me. R. C. TAYLOR.

Wilmington, N. C., August 22, 1881.

WHAT FRIEND HUNT IS GOING TO DO, AND WHAT HE HAS DONE.

I HAVE been thinking some lately of sowing a lot of seeds of different honey-plants, and would like your advice as to kinds, amounts, etc., best to sow. We have here profuse quantities of white clover and wild red raspberries; but basswood is not very plenty; buckwheat is quite largely grown here too, but there are intervals in the blossoming of the above, especially in dry times, when the bees can do but little, and it is just such intervals that I would like to fill it up by planting various honey-plants.

WHAT HONEY-PLANTS TO SOW.

There is a railroad less than half a mile from my house, and as the land along the track is rich and mellow, I have conceived the idea of scattering seeds of honey-producing plants along the track, as I think they might as well be growing there as the useless weeds usually found in such places. What, in your judgment, would be best to sow in such localities? Of course, it would have to be something vigorous enough to grow without cultivation.

TWO QUEENS INSTEAD OF ONE.

I made a nucleus colony last June by putting a few frames of brood and bees into a new hive, giving them at the same time a sealed queen-cell; a week later I found the cell torn down, and a number started from their own brood; but their brood being from a hybrid queen, I cut them all out and gave them another frame of brood from a pure queen, containing a sealed queen-cell; a few days later, on looking them over, I found this last cell open, but could not decide whether it was torn down or the queen hatched; so I took another sealed cell, of which I had plenty, and laid on top of the frames. Three days later, I examined them, setting one frame in an empty hive, so as to have more room to handle the rest. I found eggs in several of the combs, and looked until I found the queen, a nice large one, when I prepared to close up the hive, and as I was about to replace the frame from the empty hive, I accidentally discovered another nice large queen on that, and, not wishing to lose "her majesty," I set it back in the empty hive, adding a few frames of sealed brood from other hives, and now they are two good strong colonies, with queens hatched together in the same hive. Isn't this a rather unusual occurrence, or is it common?

SILVERHULL BUCKWHEAT SEED.

I see by a late number of GLEANINGS that you ran short of silverhull buckwheat, and had to send clear to Mr. Gregory, and pay $1.75 per bushel, and, I suppose, freight also. Now, brother Root, was it *very* wicked for me to smile just a little all to myself when I remembered writing to you last spring, and trying to sell you some, and you offered me only $1.00 per bushel, delivered at your place? If you get in another such a fix, just drop me a line, and perhaps I can help you a little.

I had 6 swarms last fall, and lost 4 in wintering; have increased to 8, and bought one, so I now have 9 all in good condition; I lost one or two of them just from pure carelessness, in letting the entrances get stopped with ice, and so smothering them. E. HUNT.

Sheridan, Montcalm Co., Mich., Aug 29, 1881.

At present, friend H., I know of no honey-plant that will succeed without cultivation, and the best among the cultivated plants is the Simpson. Can't you get the railroad company to let you set out the plants and cultivate them? The early variety I have several times spoken of can easily be made to fill the gap between fruit-blossoms and clover.—We often have the experience with queens you mention, and I would much rather have two queens in a hive than none, and so we put in a queen-cell, in all doubtful cases.—Thanks for your hint on the buckwheat. The trouble is, that, with our many lines of business, I can not remember who has made me good offers; and in the case you gave, when I made you the offer I probably had all the seed it seemed I should be able to sell. When a "run" came for it, and we were out, your offer was forgotten. We now have a book containing the name of every thing we deal in, and of whom we buy. When some one makes us an offer, we go to this book. The book is large, and we have had trouble already to so arrange it alphabetically that we can turn to the desired article instantly. I don't think it was wicked at all for you to smile; why did you not "smile" right back, on a postal card?

HONEY-BOARDS vs. CHAFF CUSHIONS, ETC.

I HAVE not lost a single swarm in the winter for four years. First, as soon as the bees are done gathering good honey from basswood, I weigh or examine all swarms; and if any of them do not contain honey enough, I feed them good honey until they do. Next, before cold weather sets in I raise up the slats which cover the holes in the honey-board, and with a narrow knife-blade remove the little bits of comb on top of the frames, being sure to remove it from between the frames when there is any, thus giving a little passage between all the combs where one did not previously exist. Now, when they are set in the cellar I remove the slats from the two front holes in the honey-board; place the super over them, and then let them alone until spring; still, about the middle of winter I raise up one end of the super about an inch, and let it remain so for the purpose of giving them more air. I put nothing in the super, because I believe the air will carry off the moisture from the bees much better than any thing else; neither (and this is what I consider an important point in wintering) do I loosen the honey-board after it gets so late that the bees can not glue it on again. I would not do it for much less than the price of the swarm. I believe that removing the honey-board, or substitute thereof, allows too great an escape of the heat from the bees; because they want a little upward ventilation, it does not follow that they want the roof of their house torn off.

And now a word about honey-boards. If I am not badly mistaken, wood is the greatest non-conductor of heat of any thing that we can place over our bees. I would not exchange a good pine honey-board for all the chaff that ever grew in the West. I believe that a swarm of bees can be exposed to too much cold in a cellar by removing the honey-board, and so allowing the heat from the bees to be constantly escaping. I use the Langstroth hive.

NELSON HUBBARD.

South Strafford, Vt., July, 1881.

Quite a number of our neighbors winter bees in the old-style L. hive, with honey-board, right out on their summer stands; and as several small apiaries came through with scarcely more than their usual loss, in this way, it can not be so very reckless, after all. They uncover a few of the holes in the honey-board, right over the cluster, and that is all. I feel pretty sure that it is a bad thing to break the honey-board loose, late in the fall, and I am inclined to think this is one thing that caused so many to die where queens were introduced late in the fall. Statistics have shown very decided advantages in chaff hives; but I think they might perhaps do just as well, if the cushion in the upper story were omitted, and a board with a few holes in put in its place. This is to be done, of course, before cold weather sets in. The number of openings, very likely, should be governed by the strength of the colony.

CALIFORNIA.

IS IT REALLY SO MUCH AHEAD OF US, AFTER ALL?

GLEANINGS for this month came to hand, and I take great pleasure in reading the letters of the different correspondents, and have some good laughs in comparing the different modes of wintering, for they are all new to the amateur bee-keepers on this coast.

I think there would be but few going into the bee business here had they to build cellars to put their bees in, or go to the trouble of packing in chaff, sawdust, old carpet, etc., to save their bees; that is too much like work; and to go into winter-quarters with fifty or sixty stands of bees, and come out in the spring with only one-half, is rather discouraging. Here we place our hive on the stand, and it remains there without any protection, summer and winter. But we have our setbacks in this country as well as you in the East, and perhaps lose as many bees on account of drougth as you do from freezing. The last few years have been very uncertain; we can count only on every other year for a honey crop.

In 1879 I had 125 stands; the spring opened finely. In February the willow was in bloom, and the bees breeding up strong. In March there was a world of bloom, and the bees gathering honey in April. I extracted from the colonies, and had my bees in good shape, and there was a good prospect of a large honey crop. The first of May we had a few days of hot north-east winds, which blasted all the bloom; the bees killed off the drones, and went into winter-quarters with but little honey. The consequence was, in the spring of 1880 I had only 30 stands alive out of 125, and most of my neighbors were in the same boat. I know you will say, "Why did you not feed?" But we did not all the same, but think we will the next time. You would have laughed to see your old friend Wilkin traveling around with his wagon loaded with bee-hives, hunting for a good location, and he was not the only one that had to "boosker."

I started in the spring of 1880 with 30 weak stands; the year proved to be a splendid one. In the fall I had 80 strong stands, and had extracted over nine tons of honey. That is a pretty good yield from thirty stands, so you see what can be done with bees in a good year in this country. But this year is almost as bad as 1879. There was plenty of bloom, but no honey. There are a great many who have not taken a pound of honey from their bees, but almost all the old stands have plenty to winter on, and the bees are still getting enough outside to live on, so we will not be as bad off as in 1879. There was no increase to amount to any thing this year. My apiary is situated high up in the mountains, and in a good season have an abundance of bloom of hundreds of varieties.

I forgot to tell you that my bees are black. I will try some Italians next spring, and see what the difference is, if any. Wilkins is about 12 miles from my place. No honey this year. He is buying to ship to England. G. W. LECHLER.

Newhall, Los Angeles Co., Cal., Aug. 21, 1881.

RAMBLE NO. 7.

OUR ramble this time takes us to the town of Granville, and to the apiary of Charley Blossom. Mr. B. has about 80 swarms, and runs them for comb honey. His bees are in the Langstroth hive, and are allowed to swarm naturally, and two or more swarms are put together in the new hive, or they are put in until the hive is overflowing with bees. The sections are put on and are filled in an incredibly short time. Thus a large yield of honey is obtained from the new swarms. Our friend Charley winters his bees upon their summer stands with very good success. Instead of packing with chaff, he uses a hive made of 1¼ lumber. The soil upon which they stand is a gravelly loam; but little moisture is retained on the surface, and the warming influence of the sun is felt more here than upon other soils. We think it may have some influence during the winter. Another prominent bee-keeper of this town is Stephen Staples. As he has just commenced his study of the habits of the honey-bee, and has had good success in raising a fine lot of honey, and losing a number of swarms during the past winter, he prefers to be classed with the A B C's at present. We however predict his success in the future, for he is a most successful farmer, and one of the most renowned fox-hunters in all of this section.

In another portion of Granville we find Stephen Carpenter, a man over 70, whose weight is over 300. Mr. C. has a fine cellar, and makes it a point to put his bees in the heart of it, thus giving them plenty of ventilation all around. The heart of his cellar did not save his bees, through last winter, as his loss was fully one-half. Both of the above Stephens belong to the society of Friends, and we all know what good thrifty people they all are. There are several others starting apiaries in this town; but all they want is just to get honey enough for their own use, when we know they are itching for a hundred swarms and piles of honey. Another peculiarity with some is, that "my daughter or my son does the *fussing* with the bees."

In the adjoining town of Whitehall are also several bee-keepers, and it is a good locality for the storing of honey. Raspberries, white clover, and basswood are abundant, while upon the marshes around the head of Lake Champlain are quantities of button-bushes.

We will visit but one apiary in this town, and hope your juvenile class will find some thing in it to encourage them. Willie McLachlin is a boy about 11 years of age. He had two swarms in the spring, and purchased a few more, which, with his new swarms, gave him nine. From these he sold fifty dollars' worth of honey up to the first of August. His honey is put up in pound sections; a neat label is attached to each one, and his demand at 20 cts. per lb. is greater than his supply. One swarm gave him 75 lbs. Of course, Willie's father and mother encourage him in all this, and the consequence is, that instead of being a noisy street-boy he is a quiet business lad.

We wish here to call your attention to that bee-sting mentioned in Ramble No. 5, June No. I have recently seen Mr. Andrews, and can give further details. The honey was taken from the hive in the fall, and put away for winter use. It was in a large box, and as the honey was gradually used out there was some drip in the bottom. It was in May, fully seven months since the honey had been taken from the hive, that his daughter dipped up a spoonful of honey from the bottom of the box, and in the act of swallowing, the sting alone (there was no bee in the honey) caught in her throat, and the poison took effect unmistakably, as she was always affected with a prickling sensation over the whole body. The doctor, after removing the sting, examined it under a glass, and could see the poison-sac, and the sting had a fresh appearance. It was certainly preserved in the honey for months. J. H. MARTIN.

Hartford, N. Y., Aug. 19, 1881.

May the Lord bless Willie McLachlin, and may his example move more to do likewise! The salvation of our country depends on such as he. The streets and crowds of boys around our depots are the places where Satan is continually training our youth for the purpose of replenishing our prisons and reform schools. May the Lord bless thee, Willie, and help you to stay right where you are, despite the temptations that shall perhaps soon tend to lead you away!—I can not quite give up about that bee-sting, friend M., especially as you say the sting with its poison-bag had a fresh appearance. Is it possible for any one to be sure it might not, in some unaccountable way, have come right from some live bee within a few moments?

WINTERING.

ALSO SOME THING IN FAVOR OF OUT-DOOR WINTERING.

THE first condition for the successful wintering of bees is to have bees to winter, and plenty of them in every hive; good strong colonies, completely crowding the brood-chamber in October, are the best. These are best obtained by keeping each colony in prime condition through the summer. If this has not been done, weak ones should be doubled up till all are strong.

The second condition is an abundance of good sealed stores, provided as early in the season as possible, and kept for winter use. Colonies which are used to get box honey will usually have enough in the brood-chamber, but those used for extracted honey will often be short. Even if we do not extract from the brood-chamber (I never do), if they have a good queen they will carry the honey nearly all above, and give the room in the upper story to the queen. Some combs of sealed honey should be kept for such colonies. Honey is the natural food of bees, and when gathered and sealed up early in the season is as good and cheap as any. Give them plenty of it, but not too much, allowing them some empty comb on which to cluster. If they have what you think is just enough to take them through the winter, loan them one more comb containing five or six pounds of sealed honey. If they do not need it, they will give it back to you in the spring: if they *do* need it, they will pay it back in the summer with interest.

Now for the figures. I had 50 colonies last fall, one-half in a good, dry, well-regulated cellar, and the remainder on their summer stands. Of the 50, I lost 17, and all but one of these from starvation when the winter was nearly over. They had honey enough for an ordinary winter, but not for such a severe one. Five pounds more to each hive, 80 lbs. to the 16, would have taken them through. At 10 c. per lb., this would have cost $8.00. Thus for $8.00 I might have saved 16 colonies, and received from them this summer 50 lbs. apiece, or 800 lbs. of extracted honey, worth $80.00. It would have paid. What a difference it would have made in the reports last spring and this summer, if these tens of thousands of colonies which starved to death had all been saved, as they might and should have been! Besides, it is not right to rob these little creatures of the food they need and so carefully provide. Nor does it seem altogether consistent to call them "our little pets" and then after getting the surplus they afford, to steal or take by force because we are stronger than they, the few pounds they need to keep them from starvation in winter. But we do it, or have done it, not on purpose, but in our carelessness or avarice. Then, after our "blessed bees" are dead, we fill the papers with lamentations over our losses, and perplex our brains trying to discover some method of wintering bees without loss. There is one thing about which I am resolved, and about which every bee-keeper should be resolved, to let no more bees die of starvation.

The third condition of successful wintering is some kind of protection from the cold of severe and protracted winters. This is not as important as the conditions previously mentioned, because, if they have been complied with, bees in ordinary winters pass through in almost any kind of a hive. Still, it is important, as the bees are the better for it any winter, and it is really necessary in very severe ones. There are two methods I have tried,— one on the summer stands, the other in the cellar. On the summer stands, protection is needed. In the ten-frame Langstroth hive, a chaff cushion should be put at each side in place of 3 or 4 honey frames removed. Over the remaining frames, some sticks should be laid, and over all a cloth or piece of carpet put. Then a second story should be added, and filled with chaff. On this the cap should be put, and the hive placed where it will get the winter sunshine at least part of the day. For the cellar, the chaff cushion are not necessary; yet, as they will be of use when the hives are returned to their stands in the spring, it is well to put them in.

Which is the better, to winter on the summer stands, or in the cellar? I must confess, that, every thing considered, I am not certain which. If our winters were all like the last one, the cellar would undoubtedly be the better way. But they are not; last winter was an exceptional one. There are advantages in wintering on the summer stands which must not be overlooked. I have a good cellar, and have uniformly had good success in wintering in it. But some of my neighbors also use the Langstroth hive, and leave their bees out without protection, and with surplus boxes or supers on, just as in the summer. With all my care with spring feeding and spreading the combs, these colonies, left without care, would year after year be working in surplus boxes, or swarming, one or two weeks before mine. Nine hives thus wintered in 1879-'80, and which I bought in the spring, gave them next summer as much surplus honey as the thirty I had wintered in the cellar. I am not certain that I can afford to keep my bees in the cellar in ordinary winters for the advantages to be gained in unusually severe ones, especially as the bees I left out last winter, with the consumption of a few pounds more honey, came through nearly as well as those in the cellar. As it is, I will put part into the cellar, and leave part on the summer stands. But if I had no cellar, I would not go to the expense of making one until it was fully established that, in the long run, cellar wintering is the better way.

I think that the experience of my neighbors and others who have left the surplus boxes on all winter, shows that there is some advantage in having a dead-air chamber of some extent above the bees in winter. This might be covered with chaff. These men who left on the upper boxes did not break open their hives after the bees had them sealed up for winter. I have never seen moldy combs in such hives in the spring. But let us all keep our colonies strong, and give them plenty of food, and then try to find out what we do not know about the best way and place to keep them. J. W. WHITE.

Milroy, Pa., Sept., 1881.

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AN A B C SCHOLAR IN LOUISIANA.

I CAME through the winter without losing any of my bees; the 22 colonies were strong, and in good fix. All were blacks. I increased up to Aug. 1st to 80 colonies—30 natural, and 28 artificial. I bought one Italian queen, and a friend gave me another, from which I have raised 60 young queens, the most of which met Italian drones. I made it a rule to kill all the black drones I could. I have two nuclei raising queens for the other 20 colonies as fast as the queen-cells are 14 days old. I cut them out and place one above the frames of the hives I wish to put them in, which saves introducing. I hardly ever fail. They must be without a queen three days at least, or they will destroy them. I have lost a good many on their bridal trip, as they are exposed to fowls and birds. I will have them all with young queens before winter, and another year I will do the same with all the hybrids, and then I shall have pure stock. I did not aim for honey, as I wished for bees. I extracted only 720 lbs. I have as many colonies as I can attend to. I am a manager on a sugar plantation, and my time to devote to bees is limited. When I increase to 150 colonies I will devote my entire time to them.

I had two or three strange things happen to my bees. One day I found one of my young queens, 4 months old, balled in the hive. I caged her 24 hours before releasing her, then she was received kindly; four days afterward I looked for her, and found five queen-cells, when I took it for granted she was dead. So on the 14th day I went to cut some of the cells out to put into other hives, and I found her alive and doing her duty. I cut all the cells out. Why did they make those cells, and why did she not tear them down?

I had a hive of bees queenless one month. On examining, I found one side of a frame laid nearly full of eggs—from 2 to 8 eggs in every cell, and not a queen nearer than 15 ft. I did think a queen might have made a mistake and gone into the wrong hive; but why did she lay the eggs in the way she did? I have introduced a young queen in the same hive, and she is doing well.

Does the food that the bees give their young change their sex, or does a queen lay male and female eggs like a fowl? M. A. GARRETT.

New Iberia, La., Sept. 3, 1881.

Bees sometimes ball their own queen during a season of scarcity, seeming to have tried to revenge themselves on their poor mother because the forage failed in the fields. At such times they often start queen-cells. I have sometimes thought it might be caused by other hives standing too near—the young bees, after some playspell, getting in, and, finding a strange queen, commence to ball her. You will find in our back numbers, friend G., accounts of stocks that build queen-cells right along, where they have a laying queen.—Your last case is simply that of a fertile worker, which subject you will find fully discussed in the A B C book.—Queens lay both kind of eggs, like fowls, but they lay drone eggs in drone cells, and usually, worker eggs in worker cells.

IS POLLEN AT FAULT?

HOW SHALL WE FIX OUR BEES FOR WINTER?

FRIEND ROOT:—The ravages of last winter have caused a multitude of views to be expressed as to the real cause of the general mortality. I would say, in regard to them, as Dr. John Cumming once said in regard to the many expositions of the book of Revelation, "A great deal has been written upon this subject, much very foolishly; more very rashly; nothing, however, in vain." There will be some light evolved in almost every view expressed. It is not to add myself to the already colossal number of writers who have ventured to dissipate the darkness enveloping this subject, that has prompted me to write this article, but to correct, if I can, some views that have been already advanced which I believe to be untenable.

It has recently been maintained, by some very respectable writers on apiculture, that *pollen* was the Pandora's box out of which all our ills, during the last winter, issued. Is this true? Let us see. What is pollen but the fecundating dust of the anthers of flowers, which bees have gathered, by their natural instinct, from time immemorial? It is indispensable food to the young larvæ, without which brooding can not be successfully carried on. It has, therefore, been in every hive, in its normal condition, ever since the existence of the honey-bee. Its presence in the hive during winters in which bees have easily survived, as well as those like last, in which dysentery has prevailed, can not be questioned. Why, then, charge the whole disaster upon the pollen, as if it were terribly at fault last winter while perfectly harmless in other winters that bees have generally survived? We might as well attribute blame to the natural food of the human family, in seasons conducive to dysentery, as to charge the natural food of the bees with being the cause of dysentery among them last winter. The fact is, that there are certain conditions of the human system, and of the atmosphere, necessary to the enjoyment of good health, even when we have the most suitable and substantial food; and the same thing, I believe, will hold good in the case of the honey-bee.

Let us, then, look for a moment at the facts in the case. These in reference to last winter may be summed up into two. First, we had a continuously severe and cold winter, lasting from the beginning of November until the last of March, in which bees in this latitude had only a single flight. Second, the mortality during the winter was unparalleled. These are admitted on all hands. The condition of the bees was by no means uniform. Some were in good condition, others were not; but all suffered less or more, whether on summer stands or in cellars, packed or unpacked. I infer, therefore, that the cold of last winter, continuous as it was for whole months without a single day of sunshine (which, by the way, to all who noticed it was very remarkable), caused a condition that induced dysentery almost as an epidemic. True, there were other secondary conditions, induced by the excessive cold, that contributed to the fatal result. Bees were excluded from reaching their stores of honey; this would necessitate their eating more pollen than they otherwise would, if it were within their reach. The effect of this would be dysentery. The cold would likewise, as Mr. Dadant has shown in a recent article, cause them to eat more honey to keep up the necessary temperature. This, if long continued, would likewise result in the same way, if prevented from having a purifying flight. Neither the pollen nor the honey, do I believe, was greatly at fault, but the cause of the general calamity was the remarkable severity of the winter, which was entirely beyond our control. We might, then, with equal propriety, charge the cause of the "epizooty" among our horses some years ago to the oats and corn they ate that season, as to charge the cause of the bee dysentery last winter to the harmless pollen and honey that bees have gathered and eaten since they hummed for the first time, among the primitive flowers of the garden of Eden.

Bee-keepers need chastisement, as well as others, to *keep* them in mind of the divine sovereignty. They are to remember that God gives power to become wealthy in bee culture as in other things. Farmers have their failure in crops; horticulturists have their poor seasons; merchants have their disasters; wool-growers their epidemics, and why not bee-men? Let us, then, learn all we can from our failures. A defeat to some generals is better than a victory. I hope it will prove so to us.

This article is already too long, or else I would tell you how I have been succeeding. But I will only say, that I have been doing well. I have made some money. This is the only season I have ever realized my outlays and somewhat of a gain. But I have been as busy as a nailer. I hope to have some leisure now to write on some topics.

WM. BALLANTINE.

Sago, Muskingum Co., O., Sept., 1881.

Thanks, friend B. I think your point a good one, where you say we might almost as well lay the blame of the epizootic among horses to their oats or corn, as to lay the blame on pollen for the losses in wintering. Still, I have seen such good results in wintering with sugar stores and no pollen, that I feel pretty sure that the food that nature furnishes is not always the most wholesome. Our regular food does very well for us, usually; but during a time of severe drought, such as we are having now, almost everybody has to be careful what he eats, and not a few of us have to come down to plain bread and milk, graham, or some thing of the like, instead of partaking of the fruits that we usually eat with impunity. I am inclined to think it well to keep out the pollen in winter, much as we put the sweet apples, pears, and melons on a high shelf where the children won't see them when they have frequently recurring spells of a —— I suppose you all know how it is, if I don't tell it.

JONES'S BEE ISLANDS.

REPORT OF A VISIT TO THEM.

FRIEND ROOT:—Your request, that I would furnish some account of my recent visit to the above islands, was duly received, and my will was good to comply with it sooner, but I am one of those unfortunate mortals who always have more work to do than time to do it in. However, I will now try to give you and your readers an idea of an enterprise, in which all bee-keepers can not but feel a deep interest.

The islands lie in the Georgian Bay, and are part of an immense archipelago. Talk of the Lake of the Thousand Islands! here are from 3000 to 5000, of all shapes and sizes. They have never been accurately counted, are unsurveyed, and still in the hands of the government. Jones has located there, with the right of purchase when they come into the market. The island which is the center of operations, is called Palestine Island. It is distant from Beeton, Mr. J.'s home, 100 miles, 40 of which are traveled by rail, and the remainder by steamboat. There is daily communication between Palestine Island and Beeton, the steamer plying between Collingwood and Parry Sound passing very near to a jutting point of Palestine Island. From this island, bees and all needed supplies are distributed to the two other islands, named respectively Cyprus Island and Italy Island. These islands are from 6 to 8 miles apart. There are no bees in all that region, except what Jones takes there. A stock of bees could not live in that region on natural supplies. The bees taken there to carry on the breeding business gather very little, and must be fed continually all through the summer season. It is a bleak, stormy region, but often very pleasant in the time of year when the heat is oppressive further south. Of course, it is lonesome, there being no settlement nearer than Parry Sound, in one direction, 16 miles off, and Collingwood, in the opposite direction, 60 miles off. The bees are taken to these islands in the spring, and returned to Beeton in the fall. This year was characterized by such a cold and backward spring, that operations could not be commenced until the middle of June.

Of course, the object aimed at by this isolation is to keep the three great races of bees entirely separate, so as to secure the absolutely pure fertilization of queens. Palestine Island is devoted to Holy-Land bees, and as these are preferred by Mr. Jones, as well as in brisk demand by other bee-keepers, the chief attention is given to them. More correctly, I should say, a larger number of Holy-Land queens are reared than of the other races, the same care and attention being given to all. The young queens are reared mostly in full colonies at Beeton, shipped to the islands for mating, returned to Beeton after they have begun to lay, and are thence despatched to all points as ordered. It is a rather tedious and costly process, but it secures the object aimed at, with unerring certainty. Cyprus Island is devoted to the Cyprians, and Italy Island to the Italians. On each island there are a number of nucleus hives, accompanied by a number of full colonies containing the best drones produced at the Beeton apiaries. Besides the breeding of pure queens, a variety of crosses is being tried, of which not much can yet be said with positiveness, for crossing and breeding for points are slow processes. I will not go into the minutiæ of daily work on these islands. Experienced bee-keepers can easily picture that to themselves; but I will say, that the operations are carried on systematically, and, so far as I could see, with great precision.

The general family likeness which subsists between the three races of bees now prominently before the apicultural public, necessitates a breeding establishment such as this, until such time, at least, as by repeated experiment, and thorough testing, we have settled down on *the* bee of the future. So long as we had only blacks and Italians, it was easy to distinguish them; but now we shall have to go in for pedigree, the same as horse, catte, and other live stock breeders. After spending three days at the islands, and nearly as much time at the Beeton apiaries, I can not infallibly identify each individual specimen of the races, and when a general mix comes, as it will in all apiaries where the three species of drones are flying, it will be pretty bewildering. This establishment may be said to be the one emporium of pure queens for the world. There is nothing like it in Europe, Asia, Africa, or America. Its importance is already recognized by all advanced bee-keepers, and as apiculture spreads, which it is sure to do, the value of this enterprise will become more widely appreciated.

The following are, as nearly as I can state them, the distinguishing characteristics of the Holy-Land and Cyprian races: The Holy-Land queens have very distinct black bands between the yellow, and the last band near the segment is half-moon shaped. These queens are very bright and handsome. The Holy-Land workers have a gold shield between the wings, not quite so large as that on the Cyprians. The hair is longer on the thorax, and more gray. The hair on the segments of the abdomen is a distinct gray, even to the tip, giving them a lighter appearance than the Cyprians. The Holy-Land bees are very docile—as much so as the quietest Italians. They seem less inclined to build drone comb than any other bees, and even in a populous colony will build worker comb clear down to the bottom of a deep rack. They also build an enormous quantity of queen-cells. I counted 56 in a single hive myself, and Mr. Jones states that they often start far more than that. He tells of having got 62 living queens in one batch, only 3 of which were in any way imperfect. The queens are wonderfully prolific. I saw immensely strong stocks, every available space peppered with eggs, yet they are said not to be so liable to the swarming fever as other races. After a short inspection of stocks, I could identify the Cyprians by their disposition and movements. They have a certain touch-me-not air. The Scotch motto, *Nemo me impune lacessit*, is theirs. They are very like the Italians, but a close observation of them shows that they are lighter under the abdomen, have a gold shield between the wings, the third black segment being of crescent shape, and the tip of the abdomen jet black. But their sensitiveness and quick temper are what will strike the observer most forcibly; at all events, these impressed my mind the most, and they would have impressed my body too, but that I took the precaution of wearing a veil.

But Jones eagerly awaits the advent of the *Apis dorsata*. He is fairly *daft* on that insect. I hope the Cyprians will be abolished before he gets it. An *Apis dorsata* sting and a Cyprian temper would indeed be "too utterly utter." Still, we do want a bee with length enough of tongue to rifle the cloverheads of their large store of sweetness. If Mr. J. can procure or develop a bee that will gather the red-clover harvest of honey, he will crown his apiarian achievements with a feat that will send his name down to posterity with a halo of glory around it that will make him the wonder of coming generations, and the apicultural hero of all time. This is what he is working for. Meantime, he reports progress thus: "I recommend the Holy-Land bees, and think they will outstrip all others thus far obtained." Still, I think we shall hang to the Italians for some time yet. They are among bees what Wilson's Albany is among strawberries. The Holy-Land bees are new comers, and a new broom sweeps clean. I am inclined to believe these three races have had a common origin, their comparatively slight distinctions being attributable to local and climatic influences. Even if *Apis dorsata* does not come along, we ought to be able, with the four races now in hand, to produce a bee better than any of them.

WILLIAM F. CLARKE.

Listowell, Canada, Sept. 3, 1881.

Many thanks, friend Clarke. It may be that all of our readers are not familiar with the fact, that the writer of the above was at one time editor of the *American Bee Journal*. I mention this, because his wide experience adds weight to his observations and opinions in regard to the enterprise of friend Jones. I presume, from the talks I have had with friend J., that the food he uses is granulated sugar; but I would also like to know if he finds it necessary to furnish a substitute for pollen, or does he find enough of that? If not, our friends who complain so much of an excess of pollen might save up combs full for him. By all means, friend J., go on; and when you lack means, tell us how we can help you. The Holy-Land bees certainly have some strong points of difference that promise well. We often send them out to fill orders, and I have never yet heard them called any thing else than nice Italians. The bees would please almost anybody in appearance, and we have never yet had a complaint of their being cross, like some of the Cyprians.

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"SOME QUESTIONS" BY A YOUNG HAND.

As I am a young hand in raising bees, I would like to ask a few questions in regard to raising them.

How do bees gather the honey-comb? Where do they get it?

By pulling it in little scales from between the rings that form their bodies.

What time of the year do they gather?

At any time of the year when food is plenty and the weather not severely cold.

How do they gather and deposit their honey?

They lick it out of the blossoms; and when they get a load they deposit it in the cell by throwing it out through the same brush-like tongue through which they take it from the blossoms.

How do they seal their honey-cups?

With the same little scales of wax mentioned, by warming it in their mouths, or under their chins, until it is almost in a melted state.

Do bees get lazy?

I am inclined to think they sometimes do.

What causes bees to get lazy?

As nearly as I can tell, because they have nothing to stir up their ambition. Just take away some of their honey with the extractor, when their hives are full to repletion, and they will generally get over being lazy.

Do bees ever have any disease?

Bees have very few diseases, compared with the rest of the animal kingdom.

What remedy is the best?

Well, that is a big question, friend M.; but I am inclined to think I would treat them as I would the human family for most diseases. Give them plenty of the best food, plenty of good air, proper protection from the weather, and after that, a severe letting alone, that nature may do the curing.

How far will bees go after honey?

I think they do not often go more than two or three miles; perhaps not over a mile and a half profitably; but Doolittle puts it, if I am correct, nearly twice as far. I think it very likely they would go much further, if they could start out of hives in a valley, load up on the hills or mountains, and then sail down home with their loads.

What do bees do with the water that they draw from the earth and carry in the gum?

After publishing this, I hope your readers will answer these questions. H. H. MCDANIEL.

Marquez, Leon Co., Texas, Aug. 19, 1881.

In very hot weather, I am inclined to think they carry it in to make the hive cool, much as we sprinkle the floor. When rearing brood largely, and confined to the hives with only thick honey, they use a great deal to prepare the food of the infant bees. Now if the "readers" don't agree, let them give their views.

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SENDING QUEENS LONG DISTANCES

DURING THE DRY WEATHER OF AUGUST.

THE queens were received safely, and in fine condition, last Monday, Aug. 22d. One solitary attending bee in one of the cages was dead, but all the rest were as lively and bright-looking fellows as one need wish to see. Your method of shipping this time, merits my approval. I like the double cage, giving ample space for bees, and, best of all, the two bottles of water. Many thanks, my dear friend, for the pains you have taken to fill my order. You remember we have been trying for over a year, and at last, out of six queens sent at different times, we have received two in good condition.

When I received the queen at the postoffice, at least a dozen men saw a sight they had never seen before—a queen bee—an Italian at that! "Look a here, mister," said a by-stander, "you couldn't run after me fast enough down the steepest hill in all this country to give me a whole swarm of them blamed stingin' things you've got over there in your yard; but don't you forget me when you get a gum full of them yaller fellers to sell, for I want 'em." You can no doubt infer that he had had some acquaintance with my belligerent blacks, and that he had read or dreamed something about the docility of the Italians. His remark led a listener to expose all of his knowledge of bee culture by asking how long it would take "that queen and them bees in there" to make a swarm. I made the crooked places straight to his mind as well as I could, and after letting all examine my bees to their satisfaction, I invited them to visit my apiary at their convenience, and retired to my home. MILLARD BERRY.

Duck Creek, Dallas Co., Tex., Aug. 25, 1881.

Many thanks for your kind words, friend S., for I sadly needed them when your letter came to hand. We have not, even with the double cages and double bottles, succeeded in all cases. See the letter below: —

The bees arrived on the 25th, dead and dried up. If you can send bees on a two-weeks' journey, so that they will be alive when they arrive, do so; if not, why not say so? R. BEETON.

Santa Barbara, Cal., Aug. 25, 1881.

The above was a package of five queens, all in double bottle cages too. I wonder if our friend who wrote it thinks our queens cost nothing, and that we make a practice of sending them that way all the time. We have got to try it again; but with this fierce drought we are having now, I really feel fearful it will be only to lose again, although we have many times this season sent them to California in nice order.

THE CYPRIANS.

"MORE ABOUT" FRIEND HAYHURST'S "TEA-PARTY."

WELL, friend Root, I suppose I must stand up and "speak my little piece" in regard to the Cyprian bees. While "Hayhurst's Tea-Party" is quite extravagant, and was sent to you without my knowledge or consent, it will give the reader a pretty good idea of my opinion of the one bad point of the Cyps; viz., their vicious temper.

The only experience I have had with them was with the imported queen which I sent you, and her progeny. I purchased this queen of friend D. A. Jones last summer, and have no doubt that she was one of his best, as he received $15.00 for her at about the time he had reduced the price of imported queens to from $7.00 to $12.00. I raised 10 queens from her last fall, 8 of which were wintered in my yard, the other two were sold. These queens were mated with Italian drones. I could see no difference between them and the pure Italians as to wintering qualities. We treated all our bees alike for winter, and they came out in the spring all in very nearly the same condition.

Very early in the spring, the imported Cyprian colony, as well as the other eight, "yielded to treatment" more readily than the Italians; but by the time the honey harvest and swarming season began, the Italians were fully up with them, both in numbers and stores. Friend Harrington is correct in saying that "they are great honey-gatherers." So are our gentle Italians. He says, "They work on red clover." So do our enterprising Italians, who dig away at it when nothing better is at hand, and even lay up a surplus when black bees are consuming their stores. But they are not "the best-natured bees" *I* ever worked with. I used to be so egotistical as to think that I could handle, without trouble, *any* bees that gathered honey: my egotism is all gone now. Why, Mr. Editor, I would rather "go through" several hybrid colonies than one pure Cyprian; not that the hybrids are less inclined to sting when first disturbed, but a few puffs of smoke will send them head first into their honey, and, once gorged with this, they are no trouble. Cyprian bees, at home, *never* gorge themselves; they are always on the alert, can not be frightened, and the slightest jar sends thousands of them into the air, all ready to plant their stings in the first moving object they may see—the only remedy being to close the hive and leave the field to them for awhile.

Now, when a fellow is running, without help, 300 colonies in the dollar-queen and pound-nucleus business (as I did during the busy season this year), having orders pouring in with every mail, customers, as well as bees, in a hurry, or during extracting time, when every minute lost means pounds of honey gone, it is not very pleasant to lose even ten minutes of the precious daylight for such a purpose. I can work all day long without the use of smoke, with my pure Italians, the thermometer at 110° in the shade, and during the worst drought we have ever known, and have no robbing, no bees hurt, and scarcely a sting; while the worst stinging I ever had was from our imported Cyprians, during the height of the honey harvest, their hive crammed with loose honey, *and I did not kick it over either.* We do not handle bees in our yard in that way, and I protest against the imputation.

Another great objection to having such stingers about is the effect upon those who are so kind as to visit us. The last time friend Salisbury was at our house, while I was recounting to him my troubles, the tears rolled down his jolly face, not so much in sympathy with me in my misfortune, but because a Cyp had paid her "respects" to his nose. He didn't stay with us so long as we would have liked; and as his frisky white Pegasus trotted down the dusty road, I thought, "Alas! we shall have no more pleasant calls from friend S. until the last Cyp has disappeared."

Please call on us, friends; they are all gone now; and if the imported queen we had is a type of the race, they will stay away. E. M. HAYHURST.

Kansas City, Mo., Sept. 9, 1881.

Why, friend H., the Cyprian colony has not behaved so very badly in our apiary. They made only one visitor (who, by the way, is quite a bee man too), hunt shelter amid the lima-bean plantation. John, who was handling the frames, stood very still, right over the hive, and he did not get stung at all. We rather like to have one such colony, just to take the conceit out of some visitors that one meets once in a great while.

UPWARD VENTILATION.

ALSO SOMETHING ABOUT LEAVING THE BOXES ON ALL WINTER.

IN the July GLEANINGS you say: "There is, without question, a significance in these reports of favorable wintering, with an opening, or openings, of not too large a size, right over the cluster." In the August number you ask: "Who can tell us more about making them (bees) wax up every thing solid, and letting them be until May?" These are the two extremes of the question of successful wintering, and it would seem that the amount of testimony, adverse or favorable, to the two systems, would determine their relative merits. To ascertain the truth, I have visited many of the most successful bee-keepers in this part of the country, and have questioned others regarding their success in wintering bees, etc. These are the facts as reported to me:—

Mr. Patete had 35 in the fall, 14 in the spring; he used box hives; part had openings through the top-board, and boxes set over them; in these the bees mostly survived; a few in hives of large size not ventilated, lived. Mrs. Kissel had 12 in box hives that had holes through the top-board, over which boxes set, not fastened down closely; they all lived. Mr. Hofman, with similar hives, and treated in the same way, out of 40 saved 18. His hives stood in the shade, and the bees were not induced to fly only in the warmest days. Others with box hives not ventilated lost all, or saved a part, according to the degree of protection afforded by the location and size of the hive. Mr. Simpson, of Rulo, uses a frame hive 12 in. square and 18 in. in height, 9 large frames below, and small ones on top. He bored holes through the cover, leaving the small frames in the hives, and set boxes on, not fastened down. Out of 39, 30 lived. Another man, with similar hives similarly treated, met with similar results. Of my own, out of 163, 2 lived through; but of these, more hereafter. Some 20 more were kept in the precinct, with results varying according to location and size of hive.

To the west of here, Mr. George Schoch, out of 83, saved 2. They were in the Quinby hive, properly cared for, as understood by the teachings of the bee journals, and as practiced heretofore with success; but without upward ventilation, and, to some extent, shaded; a serious fault, I believe, either in winter or summer. Mr. Wyant, in Langstroth hives, sufficiently ventilated to admit bees at almost any joint in the hive, wintered 17, all he had in the fall. A part of the time they were drifted under the snow. I also hear of another stock that wintered in a Langstroth hive with nothing on the frames. Mr. Bacon lives on the Missouri bottoms. He had 47 stocks in the fall; 22 lived through, and among them was one in a hive that was split from top to bottom, and spread apart fully 3 inches wide. They had wintered in this hive, and with his others had been removed in April into his smokehouse, and left for several weeks; placed one above another until the waters of the Missouri subsided, when they returned to their summer stands without serious loss of bees. They were blacks. All along the course of the Missouri River, for hundreds of miles, similar means had to be resorted to, and in no case am I able to learn of serious loss resulting from their removal. Mr. Bacon's hives were box hives, containing about 2300 cubic inches. He bored holes through the top of the hives, and set boxes over them to be filled with honey; after removing the honey, the boxes were placed on the hives without fastening on, and the holes were left open. He had known for many years that bees wintered better with upward ventilation, and had always practiced it.

Mr. Helfenbein had 12 stocks in box hives in the fall. All died but one. There was a 1½-inch hole through the top of this hive that remained open all winter; the others had no ventilation. Mr. Smith saved 12 out of 20 by wintering in the cellar. My own bees were in an exposed place, but cloths were spread over the frames, and thick cushions laid on. The warmth, generated by the bees, was retained in the hives, and also the moisture. The former, it appears, unnecessarily; the latter, very disastrously. If, as in the case of Mr. Bacon's split hive (which had also top ventilation), sufficient warmth can be maintained through the excessively cold weather of a winter like the last, in which the temperature sank several times to 30°, what necessity is there for cushions? In examining hives in March I found the bees all dead in 65 ten-frame American hives that fitted closely, and were covered with the greatest care, when at the same time in the old large hives of poor manufacture and badly fitting joints, the bees were alive; and in these, along the side of the apiaries from which the prevailing winds blew, the bees were in better condition than elsewhere—a circumstance indicative of an infectious disease. In large hives, the stench originating from the disease is less concentrated. and, therefore, less virulent; and the combs at some part of the hive are generally clean, on to which the healthy bees, if any remain, will generally remove.

Out of upward of 1100, six-sevenths perished.
" 323 in frame hives, 54 lived; about one-sixth.
" 700 and over in box hives, 106 lived; about one-seventh.
" 56 frame hives, ventilated through cover, 47 lived; about six-sevenths.
" 135 in box hives, ventilated through cover, 67 lived; about one-half.
" 20 wintered in cellar, 12 lived; about three-fifths.

I regret that I am not able to give the dimensions of the various kinds of hives, and the advantage accruing from the use of large ones.

In reading this report, one will be surprised at the nearly utter destruction of the larger apiaries; smaller ones, however, in which no live bees remained, have not been mentioned especially, on account of space. The greater loss is in part due to the unprotected locations of the apiaries. Where they were protected from the cold winds of winter and spring, and induced to fly on mild days by the genial rays of the sun; and with such as were in large hives, though not ventilated at the top, the success was greater than with those in exposed positions, or with those wintered in the shade. The infectious nature of the disease renders it impossible, in most cases, to suppress it during cold weather; and where there are most bees together, it assumes the most virulent type. The greatest success was with frame hives, ventilated through the top; yet this higher degree of success is probably due to the superior locations in which these hives were kept — Mrs. Kissel having saved all of her bees in box hives. There is no apparent advantage in the style of hive; but those of large size have wintered bees better than smaller ones. Frame hives, without cushions over the frames, have wintered bees better than with them. Those the most successful in wintering had nothing over the frames.

JEROME WILTSE.

Rulo, Nebraska, Sept. 1, 1881.

Heads of Grain,

From Different Fields.

PATENT HIVES, ETC.

HAVING been humbugged to a small amount (yet large to me, a poor man, the sum of $20.00), I would like to know if there is a patent on a hive called "Kidder" hive, and if they have agents to sell these hives for them. This sum I paid to a man who called himself Kirk Kidder, for an outfit to sell, but which I never received. Having been caught in a small trap some time ago by———— for queens, smoker, etc., which I never received, it served me about right for being so green as to trust a man, not knowing whether he is responsible or not. All goods that I have ordered from you have come promptly, and give good satisfaction. All goods that I have ordered from the friends who advertise with you have been satisfactory. Please give information concerning these parties if you can.
C. HAUCKE.
Greenup C. H., Ky.

We have several times notified our readers that the Kidder family were all in bad repute, and we now say, have nothing to do with any man who travels about selling rights for patent bee-hives or any thing else. Do not even stop to talk with them. You are wasting your time any way, and will stand a great chance of losing your money, if you even allow them to get your attention. Thanks for your kind words in regard to our advertisers. The party you mention is, I think, all right, and we have written him, to see where the trouble is.

THE ANT-LION AS A FRIEND OF THE BEES.

While walking among my bees this evening I noticed that, where I had put sand about the hives for keeping down grass, it was utilized by the ant-lion; and the question at once arose in my mind, whether the curious little insect might not be an advantage to us in keeping down the ants, which are so persistent about hives when the tenants are not very strong. Did it ever occur to you or any of our fellow-workers? As some may not be familiar with the insect, I will add a short description, as I have so often noticed them. It is in its larva state that we wish to notice it, as an insect about the size of a carp-fly, with flat oval body, just the color of sand, and with powerful mandibles, which are hollow, and which serve as tubes for conveying the juices of its prey to its own body. It delights in a dry sand, where it throws up the sand from a central spot until it has made a conical pit of perhaps 1½ inches diameter at the top, and just as deep as the sand will lie on the inclined sides. At the bottom of this pit it secretes itself, and awaits the coming of some unfortunate ant or spider that may venture too close to the edge of the pit. Should the prey be at all likely to recover its position at the top of the pit, a shower of sand will be sent over it, making an avalanche, which is sure to bring it within easy reach; and once in the mandibles of the ant-lion, its life blood is drawn, and its own carcass thrown out, and every thing about the pit arranged for another victim.

I have put two or more in a small vial, to observe their movements, and generally a combat begins at once, and continues till only one remains. Whether the number of ants thus destroyed would materially affect the numbers about a swarm of bees, I can not say. I noticed eleven of these little pits about one hive this evening.
FRANK J. BELL.
Moosehead, Pa., Aug. 24, 1881.

Thanks, friend B. I have often noticed this queer insect, and its manner of securing its prey, and I can think of but one objection to inviting them to take up their abode near our hives. It is my impression that the perfect insect is a sort of a dragon-fly that sometimes catches bees. If this is so, we had best look out. Will friend Cook staighten us out on this point?

SPANISH NEEDLES, ETC.

Dry, DRY, DRY. Bees are now just beginning to bring in honey and pollen from Spanish needle. How the plant can survive the drought is more than I can imagine. We have not had any rain for three months, to amount to any thing. When I was a boy I said to pa, "What are those nasty Spanish needles made for?" Pa said, "God knows best." And now I begin to see that God made every thing for a purpose. "And he saw it was good." It does seem, brother Root, that if it were not for Spanish needles bees would surely starve; for every thing else is almost dried up. There has been no dew for three weeks; still, our bees are doing well. But my neighbor's bees are almost all *non est.* My bees have made more honey per hive than ever before—some as high as 200 lbs. surplus honey (comb honey). Say, friend Root, what am I to do: there are so many who want to know how my hives are made, and I can't answer all? With your consent I will write it up for GLEANINGS.
GEO. W. STITES.
Spring Station, Ind., Aug. 24, 1881.

Very glad to hear so good a report, friend S. If God did not send us the dry weather, we should not know any thing about what a blessing rain is. I presume every man, woman, and child here would smile at the sight of rain now. Our well I told you about, still holds out; but I tell you, the draft on it is severe. We should be glad to describe your hive, if you will make it brief; but I hope, friend S., you will not start any of the younger ones on any path out of the regular standard sizes of frames.

THREE LAYING QUEENS IN ONE HIVE, AT LAST.

I read much about 2 queens in one hive (laying), so I will also say something about it. You will remember, at the time when you were here, we took one frame with brood, out of a chaff hive (the hive I got of you), to give that swarm that was hanging on that peach-tree. You know that you complained about the old queen's wings being clipped so closely. Well, about 3 or 4 days later I examined the hive from which we took the frame with brood (and it also contained that clipped queen), but there was a young queen in the same hive (she had thick full wings). I took the young queen with 2 frames with brood out of the hive, and formed a nucleus. A few days later, I looked in the old hive again; well, there was another young queen (laying) in with the clipped queen. So perhaps there were 3 queens in the hive at one time, laying.
OTTO KLEINOW.
Detroit, Mich., Aug. 20, 1881.

Well done, friend Otto. I have often thought of your pretty little apiary, and wondered what you were doing there all this time. I presume the two young queens were daughters of the old one, and probably just become fertile.

THERMOMETERS.

As there has been some complaint that thermometers do not always behave with their accustomed truthfulness, after a trip through the mails, we wrote the makers, and here is a hint from them:—

Your postal is received. In reply, we state that the mercury in the tube sometimes becomes separated in transportation, but it can be united by turning the thermometer upside down, and jarring the mercury down so that it will go to the top; then take it in the hand, and give a gentle shake sidewise, and it will unite. Please consider what a thermometer is, and the price paid, and we think you will not be dissatisfied. We have to handle every thermometer over 50 times before it is finished, and then sell at 8 or 10 cts. apiece. J. KENDALL & CO.

New Lebanon, N. Y., Aug. 24, 1881.

If I am correct, I have succeeded in uniting the mercury in all that have been returned to us.

UNSEALED BROOD FOR NEW SWARMS.

During swarming last summer, I gave the new colonies a frame of unsealed brood; in every instance the colony would start queen-cells, and swarm inside of twelve days. During the present summer they have acted in the same manner. Of course, the young swarms were large ones, issued from 3-story Simplicity hives. Was it the great quantity of bees being shut down to one story that caused them to swarm so soon? WM. PARMELEE.

Bean Blossom, Ind., Aug. 13, 1881.

Very likely the cause was as you state it, friend P. I should always divide large swarms, if I wanted to be sure they would not swarm out; but very likely a second story given them would have had some effect in inducing them to stay. A second story can be loaned a new swarm, where they seem backward about all going inside, when first hived, and after a day or two, taken away safely.

CARRYING A SWARM OF BEES, ON A LIMB, THREE MILES ON HORSEBACK.

One day my father sent me on an errand about 5 miles from home, and when about 3 miles on my journey I saw a nice large colony, a mile from any house, clinging to the limb of a bush. My old love returned, with a desire to possess this colony; but I rode on, finished my errand, and tried to borrow a sack to capture the bees in on my return, but failed; but to my joy, there the bees still clung as I returned. I was determined to have them, so I dismounted, gently severed the limb on which they clung, mounted my young spirited steed, and carried them safely home, 3 miles away, still clinging to the limb over my shoulder, and I hived them in an old-fashioned gum. This is how I became the owner of my first colony. After that I was successful in discovering bee-trees (wild colonies living in hollow trees), and would save the colonies until I was the owner of several.

In introducing a queen she escaped from the cage, and soared aloft as far as the eye could see. I felt apprehensive that she was gone, but sat quietly by the colony, watching for her return. In the course of 20 or 30 minutes she came back and alighted upon the cage in my hand. This time I succeeded in getting her in the hive, and closed it. After a little I looked in and found her completely "balled." I released and re-caged her, and after 36 hours she was released and accepted. H. A. HALBERT.

Corsicana, Texas, Aug. 23, 1881.

Most people seem to think a swarm of bees must be confined when they are to be carried any distance, but I have frequently directed them to be carried in a market basket, upside down. A few days ago I told some one to cut off the limb, and bring it along. From your experience, friend H., it seems this was safe advice.—A queen will usually come back to the cage she came out of, I believe, if allowed to do so, and I think many fine queens have been lost, from a want of knowledge of this fact.

HONEY FROM CORN, ETC.

I think friend Hutchinson meant me, in July No., when he refers to that bee-keeper in his last No., who lives not many miles from him, and I admit the soundness of his remarks; but to tell the truth, I am afraid it is not for want of time, but *neglect* and waste of time with me; and then I have had but 3 years' experience in the bee business. Although I lost two-thirds of my stock last winter, my number is now good, with an outlay of $10.00 for 10 lbs. of bees. I had 7 swarms May 1, and now have 31. I would say to friend H., that we do not all of us have the education and natural ability to put our bee talk in writing that he has.

Bees are now booming on buckwheat. They were idle for 3 weeks after July 15th, except the pollen, and some honey from corn. The question has been asked, in the back Nos. of GLEANINGS, if bees gather honey from corn. Mine certainly have this year, and if any of you will call on me, you shall have a dish of it with some bread and butter to try it. I extracted 40 lbs. It is as light as white clover, but of different flavor. M. D. YORK.

Millington, Tuscola Co., Mich., Aug. 13, 1881.

If friend Hutchinson did mean you, friend Y., you want to go to work and let him see that your bees are not always a bill of expense. About that corn honey: Did the bees get it from the common field corn, and how did they act when they were gathering it? It is not only interesting, but it is a very valuable point. If we can raise honey at the same time we raise corn, it will be a pretty safe business; and we know that vast quantities of saccharine matter, or grape sugar, is contained both in the stalk and ripened grain. If we can get the bees to secure the honey right direct from the waving field, what a short cut it will be! I think this is one of the things that will be done, in the next fifty years.

GOOD THINGS IN UTAH.

Last evening, at 5 o'clock, the Peet cage, queen, and the accompanying bees, all came to hand in good condition, only one bee dead. The candy seemed to be quite dry. My wife put a few drops of water on it, and the bees went for it like so many pigs. I introduced according to directions. I think all is now right. Bees are doing well here this season, as far as I have learned. The Italians that I got of you last season are doing finely. My old neighbor Prince is doing a "smashing" business this season; has had 87 swarms, all doing well. Some of his hives have already given a surplus of over 100 lbs. to the hive. A part of this luck has come through the A B C and GLEANINGS; however, he is one who attends strictly to business.

The mesquite, I must say, produces the best-flavored honey that I ever tasted. It is far ahead of linn or white clover. If you want a start of the shrub I will send you a package of the beans. No trouble to get them to grow anywhere. It is a species of locust. W. LANCASTER.

Washington, Wash. Co., Utah, Aug. 23, 1881.

Many thanks, friend L. Perhaps a number of the friends would like to try the mesquite, and I presume you will send them to any one who will inclose a stamp or two for postage. From your statement, I should say your locality would compare favorably with almost any of ours.

ROCKY-MOUNTAIN BEE-PLANT IN ITS NATURAL HOME, ETC.

I was going to write you that I thought it was all nonsense to use any smoker at all with Italians; that is, I did handle mine all summer without any smoke at all; but the last few days they are behaving very ugly, and so I think I had better try a smoker. We have any amount of Rocky-Mountain bee-plants growing wild here, but I never see any bees working on them—only wasps, bumble-bees, and the like frequent them. G. A. STORZ.

Stonewall, Las Animas Co., Colo., Aug. 11, 1881.

We have them in our garden every year; and although we see some bees on them, it is never at all like the roar on its near relative the Spider plant, just at the break of day.

QUEENS FIGHTING IN THE AIR.

I have thought for some time I would give an idea about the loss of queens on their bridal tour. I am satisfied that they meet each other in the air, and there kill each other. Now in future, when you lose a queen under these circumstances, if you will notice carefully, either you or some of your neighbors have lost another queen. A. S. SMITH.

Atlanta, Ga., Sept. 3, 1881.

You may be right, friend S.; but it seems to me "all out doors" is almost too large for the small number of queens any neighborhood might send out at the same hour in the day. Drones, you know, go out in thousands, and they, too, instinctively seek and go after the queens. I should hardly think queens would seek each other; for if they did, nature would seem to be defeating herself. Nevertheless, we are glad of the suggestion.

GETTING A YOUNG QUEEN TO TAKE HER BRIDAL TRIP.

Did you ever try, when having a young queen that was slow about getting fertilized, taking out the frame she was on and holding it to the sun to get her to take a flight? By holding her to the sun from 5 to 10 minutes I have never failed to get them to take a flight, if they are old enough; and if they have bad wings, or can not use them well, they will mostly jump off the frame and try them. I had a nice young queen that could not fly at first, and by practicing two or three times I succeeded. A. H. DUFF.

Flat Ridge, Guernsey Co., O., Aug. 19, 1881.

I have noticed the same thing, but I do not know that I ever put it into practical use, as you have done, friend D. I have often seen young queens take wing when the comb is held up in the sun, as you suggest. Sometimes it will be noticed, by their nervous movements, that they are inclined to fly, for some little time before they take wing; and when introducing a fertile queen, I often see by these same movements when she is inclined to fly, and prevent it by hastily getting the comb back into the hive.

THEY "SWARMED AND SWARMED AND SWARMED!"

My bees have done pretty well in the honey line this season, but not near so well as they would have done had we not had so much bad weather through the clover season. They got into the notion of swarming, and they swarmed and they swarmed and they swarmed. I had the queen clipped, and I put them back and put them back, and it did no good. They killed some of my best queens, so I had to put some of them in new hives. It's no use in trying to keep bees from swarming when you are trying for box honey. JONATHAN D. HUTCHINSON.

Windsor, Mercer Co., N. J., Aug. 18, 1881.

It is not much use to try to keep them from swarming by putting them back, I dare say, friend H.; but there are ways of preventing swarming pretty well, if you are on hand and ready for them. Many times it may be best to let them swarm, and go into a new hive; but after they get fairly to work, give them their old combs, with their unfinished boxes. Above all things, do not let them get the swarming mania in the first place, if it can be avoided. Promptly removing all finished boxes just as soon as they are filled will do a great deal toward it. I do not believe putting swarms back ever helps matters very much.

ANOTHER IDEA ON CANDY FOR QUEEN-CAGES.

We clip the following from the *Indiana Farmer:*—

> Many of our friends seem to have difficulty in making a candy for queen-cages which will carry them safely for any length of time without water. We make ours as follows, and have not had a single loss during the season, from this cause. We have part of a barrel of granulated honey, by digging down in the center of which, that around the sides of the barrel becomes very dry. To some of this we add sufficient of "C" sugar to make a very stiff paste or candy. We add sugar so long as it will hold together. "A" sugar will not do so well, as the grain seems too hard and dry, and seems more inclined to run, and to daub the bees.

You see the above comes pretty near the Viallon candy; and as it is made without heat, it is a very simple and easy thing to do. Oliver Foster suggested the candied honey, after being drained, but the addition of the sugar, I think doubtless an improvement. To make it stay fast in the cage, it will probably need pressing into auger-holes, open at one side, similar to those in our latest Peet cage.

BEE-STINGS AND RHEUMATISM.

My age is 49; handled bees 8 years; had no rheumatism before engaging in the business. My opinion is, that bee-stings make my rheumatism worse; indeed, I have thought it was the cause of it, and came near giving it up at one time on that account. I get *several* hundred stings during the season. I find Italians sting just as badly as the blacks, and the hybrids sting worse than either. The Italians are the most hardy, and the best honey-gatherers, and, taking all together, worth as much again as the blacks. Bees in Scriven Co., Ga., will make from 65 to 75 lbs. of honey and their winter stores; that is, if well attended to. J. W. JOHNSTON, M. D.

Scarborough, Ga., Sept. 7, 1881.

Now, friend J., the above is rather a back-set on our plans for curing diseases by bee-stings. I wonder if such is not about the case with all kinds of medicines. What cures one man will kill another. Let us have the facts, no matter whose pet theories they spoil.

MISTAKES OF POSTMASTERS.

The smoker, catalogue, and receipt came all right; but I sent 50 cents for a bee veil. You gave a receipt for a veil, but if you sent one it did not come. JOHN MCGREGOR.

New Eagle Mills, Grant Co., Ky., Sept. 5, 1881.

Now, friends, it would seem from the above that we must certainly be at fault, for it is almost an unheard-of thing for such an article as a bee veil to fail to reach its destination, if properly sent; and so even I settled down to the conclusion that the clerks must be at fault, and would have no doubt told them so had not my eye caught sight of a postscript at the bottom of the letter, in another handwriting. Here it is:—

P. S.—The bee veil has been overlooked. You need not send it. It was a mistake in myself that they did not get it. P. M.

I presume postmasters are fallible, like other folks; and in view of it, shall we not be slow in deciding positively who is at fault?

INSERTING QUEEN-CELLS AS SOON AS THE QUEEN IS REMOVED.

The proportion of cells torn down when inserted among my bees *immediately*, is eleven out of every dozen. M. FRANK TABER.

Salem, O., Sept. 1, 1881.

This matter, like introducing virgin queens just hatched, seems to be dependent upon the yield of honey, and perhaps some other causes. At times, scarcely a cell will be torn down, even when put in as soon as the queen is taken out; at other times, they seem to be destroyed as above. It seems to me we should be governed somewhat by the number of cells we have on hand; if a great plenty that must be taken from the hives, put them in at once; and if torn down, try again; but if you can manage so as to have your hives queenless a couple of days before inserting the cells, by all means do so. The lamp nursery helps us very much in such cases, for we can leave the hive until the queen is really hatched, and by this time they will always accept the young queen. We have introduced young queens by the hundred this season, with excellent success, if we except the few weeks past, while we have had such a drought.

UPS AND DOWNS IN WISCONSIN.

As other A B C scholars report from time to time, and as I have not seen any report from Northern Wisconsin, I will modestly say, that in this town there were 50 swarms left on their summer stands last fall; only two came through all right; 22 were in a cellar, and had good ventilation; 13 wintered. I had 5 on summer stands, packed in sawdust; they came out with one swarm last spring, and I bought one more light one. Now I have from those two swarms 7 very heavy ones in good condition for winter.

The most astonishing fact is, we have taken 500 lbs. of honey from them this season, mostly extracted, nearly all light colored. Now, friend Root, my bees are all Italians, and from that queen I bought of you; they are the best race of bees for work in this vicinity, as others gathered only 100 lbs. per swarm. We appreciate GLEANINGS very much, and especially Our Homes; also Humbugs and Swindles. I should like to see you, and thank you for your prompt and fair dealings. D. M. TORREY.

Shiacton, Wis., Sept. 10, 1881.

Many thanks for your kind words, friend T.; but I hardly deserve them all. I am glad to hear the queens we send out produce good working stocks, but I really do not believe them any better "strain" than other people's bees, aside from the advantage that would probably accrue from importing as many queens as we do. Five hundred pounds from two colonies and their increase is rather "astonishing."

INTRODUCING BY FRAMES OF HATCHING BROOD.

I was unwilling to risk introducing my queen as the cage required, so I put her into a nucleus and gave three frames of capped brood and honey; shut up entrance, and awaited developments. This morning about fifty bees had hatched, and among them, in striking contrast, gleamed the "yellow queen" and her escorts. I am delighted with my success so far, and shall let them fly to-morrow, and begin building up from strong stocks, and feed to start the queen laying.

I am a "novice" in the business, and have taken full charge of 12 stocks here; increased to 28 and got quite a lot of surplus comb in 1-lb. sections. Isn't that pretty good for one beginning his "t-y-ties"?

A NOVEL PROCESS FOR MAKING MATS, OR WATER-PROOF CLOTH FOR ANY PURPOSE.

We are using, for coverings for frames, a cloth prepared by the following recipe, taken from the *Scientific American*. No insect will molest it, and it is a sufficiently water-proof covering for outside protection:

Dissolve 8 oz. soap in a gallon of boiling soft water; thoroughly saturate the cloth; wring out, and soak the cloth over night in a solution of 10 oz. alum in one gal. of water; wring out; rinse in clear water, and dry. We find this works well so far. A. D. WILLIS.

S. St. Louis, Mo., Sept. 8, 1881.

Your plan of introducing is usually safe, friend W., but it is expensive, because it is slow, and usually considerable trouble. Also, a good deal of brood is lost, usually, unless you can get combs containing no unsealed brood. A little care is required, also, to see that the queen does not leave the little cluster before enough bees are hatched out. The process you give of making cloth fire and water proof is the result of a queer chemical change; and since you call attention to it, I have no doubt but that it would help to prevent the bees gnawing any kind of cloth. I think you are doing very well indeed, for the first season.

HOW TO MAKE A GLASS FRUIT-CAN INTO A FEEDER.

I send you a tin to put on a one or two quart fruit-can, with metal rim. Put it on with stick up; this gives the bees a chance to get the feed when placed over the frames. Screw on the rim and try it. You can see when the feed is out. You can, if you like, put a ¼-inch board across the frames, 4 inches wide, cleated ⅜, to raise it from the frames, and bore two holes for each can; you can then put four cans on one board, and keep the rest of the frames closed up. You could also make the pieces without the stick by using larger tin, and turning it up ⅜ all around, like a cup. You see, after using the cans you can fill them with honey and sell them.

Last fall I tried to winter 59 hives; lost 28; that left 31; bought 10 for $40.00; 6 good, 4 poor; out of the 31, I had 10 good, 10 middling, 11 poor. From 41 I increased to 72 hives and 9 nuclei—81 in all. From them I got box honey, 600 lbs., and extracted 1700 lbs., making 2300 lbs. from 41, and increased 81. I want to winter 80 hives this coming winter, and I will try to fix them so they will come out like the burning bush on the mount before Moses. The Lord bless you, brother Root! J. W. Utter.

Amity, Orleans Co., N. Y., Aug. 19, 1881.

Many thanks for your kind words as well as for the feeder, friend U. This feeder is intended for the kind of glass fruit-cans that have a metal ring to hold the cover on. The piece sent is just a circular piece of tin with holes punched in it, and a piece of wood ⅜ square tacked across it with wire nails. This bit of wood prevents the collar from being screwed clear down, and so leaves a passage for the bees under it. The point made, that these cans can be afterward washed and sold with honey in them, is quite important, for the can is in no way injured, and the cover is not used at all.

THE L. FRAME.

In Gleanings for this month, page 433, Mr. J. E. Pond, Jr., says that as far as he knows everybody admits that the L. frame is the most convenient for operating. Please say to him that I for one consider it the most outlandish, inconvenient, and unhandy frame I ever undertook to use, and I would not use them and the hives connected with if I could be furnished them free, and a dollar each for my extra trouble. I want a frame that I can set on a board without killing bees on the under side of it; one I can take from the hive with one hand; one I can carry three of, when covered with bees, in one hand, and not hurt a bee; and I can take from the brood-nest without removing the sections above. When he can do that with his frame, I will admit they are approaching mine in convenience of handling.

E. B. Southwick.

Mendon, Mich., Sept. 3, 1881.

Why, friend S., one would almost think, from your vehemence, that some one was sticking a pin into you somewhere, or that you had got a patent-right bee-hive of your own, of some kind. Which is it?

AN A B C SCHOLAR IN CANADA.

With much pleasure I lay hold on my pen to inform you of our honey season in this part of Canada. Our season is now nearing the benediction period, but has been very good thus far. We started in the spring with one colony of common black bees. This one colony was tremendously cut up by the frost and steady winter, and a lack of sufficient honey. We bought them as a first swarm, but found out afterward that they were a second. Last year not being a good honey year, we fed them. Well, we started with one colony, or, rather, a nucleus, for they covered only 3½ frames in the hive. But through your valuable A B C we have run them up to 3 good, strong, healthy, active swarms; *i. e.*, if we know any thing about large swarms. The first one came out late on Sunday, July 27, and the second one two weeks later on a Sunday morning. The last hive we supplied with 9 Langstroth frames, filled with Jones's Dunham fdn., and they now have as much honey as the other two. We have robbed them of about 60 lbs of fine surplus comb honey. Strict attention would have given us more, but we are farmers, and afraid of bees, so we contented ourselves with 60 lbs. Father, however, intends to make bee-keeping his business, if he lives to get old and childish. The season has been a good one in these parts. A short distance from here good strong colonies turned out 90 to 120 lbs. surplus extracted honey. Accept my thanks for A B C. It has been a world of good to me thus far. I will make better use of it next year.

Good comb honey has been retailing here at from 20 to 35 cts.; extracted, 18 to 22; out of the groceries, at 30 cts. I could have sold 2000 lbs. at that figure.

Wesley Baer.

Benmiller, Huron Co., Ont., Can., Aug. 30, 1881.

REPLACING QUEENS SENT BY MAIL.

I do not like to think people dishonest, but there is a person here who got a queen and put her in the hive, and was away for a while, and came back, and I believe she was dead. He sent for another. I do not know whether he got it or not, but I would not like to get them in that way. —— ——

—— Ont., Can., Sept. 5, 1881.

For obvious reasons, the writer of the above wishes his name withheld. I presume it is a fact, that we who send out queens are sometimes asked to send another, when it is not right that we should do so. Sometimes the receiver reports that the queen came to hand alive, but feeble, and that although she lived a day or two, she was finally brought out of the hive dead. It may be a hard matter to decide whether the queen died from the effects of her trip, or was killed in introducing. In the former case, it was the shipper's duty to make good; in the latter, the loss of the receiver. How shall we always decide such matters? I will tell you my way: Recognizing that I am selfish, and will be very likely to see the whole transaction from a selfish standpoint, I try to take the other extreme; and if I err, err on the side of doing a little more than my part, rather than the other. Accordingly, *I* choose to stand the loss of all queens received by me, that are sufficiently alive to crawl about, but when a customer receives one from us in apparently feeble condition, I wish *him* to put her into a hive as quickly as possible, and do the best he can for her; and then if she dies, as it seems to him, on account of feebleness, I will send him another. I well know how natural it is to have thoughts force themselves into our mind after you have lost a queen, that she did not seem very lively any way; but I would far rather be wronged a little than to run any risk of wronging anybody else. Money or property that comes from wronging another can never make one happy.

WINTERING WITH SECTIONS ON.

There is considerable said about wintering with empty sections on. Empty boxes have been put on box hives here for years, and counted the best way to winter bees by many. I know of one box hive out in the orchard without any other protection, and sometimes during the winter the wind blew off this empty box, and it was left off till spring, the holes in the top of the hives still open, and the entrance at bottom of hive open one-half inch, the width of hive, causing a draft or current of air through the brood-nest most of the winter. Said hive worked well in spring, and swarmed about two weeks earlier than most bees around here.

Limerick, Ill., Sept. 7, 1881. E. PICKUP.

LOCUST HONEY, ETC.

We have had a fearful drought, and crops are nearly a failure. I extracted 500 lbs. of locust honey, but have not taken a pound since. Yesterday and to-day they have been bringing in some buckwheat honey, the first this season, and it seems quite a relief to lay the feeder aside, after having it in constant use for two months.

GLEANINGS is a very welcome visitor, and is received each month with all the pleasure of an old friend. If, however, you are going to be responsible for all losses incurred through some scamp who manages to get an advertisement in GLEANINGS, and give every fellow a smoker who says he has quit the use of tobacco (please send largest sized Bingham—eh?), and, I might add, take back all goods that we awkward chaps can't make go, I am afraid you can't keep it up to the present standard. By the way, how many of these smoker men, I wonder, have sent in their cash? C. G. KNOWLES.

Portland, Meigs Co., O., Sept. 7, 1881.

You give me more credit than I deserve, friend K. In my efforts to overcome the natural selfishness of my nature, I may have been injudicious, and possibly careless; but to guard against such mistakes, God has sent good kind friends like yourself to give me warning. The Tobacco Column has started quite a wave of reformation in the right way, and now a great many are breaking off without asking for any smoker, as you will see by the letters. Would *you* break such a public promise, friend K., if you had once given it?

POLLEN; HOW TO GET IT OUT OF COMBS WHEN IN EXCESS.

In September GLEANINGS, H. A. Davis asks how to get pollen out of combs. I have done it by soaking the combs for a day in water, and then washing out with a force pump with a sprinkling nozzle. If he has not a pump, any tinsmith can make a tube 14 in. long, 1½ diameter, with a strainer soldered in one end. Use a stick with a leather tacked around it for a plunger. I have one of them, and it works well, but not so fast as the pump. Stand the combs on their edges to soak them, or they may break out of the frames. The water to use with the pump needs warming a little, as cold water makes the combs brittle. The water must not be thrown in the cells with too much force, or it will knock the bottom out of the cells in new combs. After washing, put the combs in extractor, and throw the water out, and they will soon dry.

Please request Frank Boombrower to tell how he prepares his bees for winter, and how he gives them water. E. D. HOWELL.

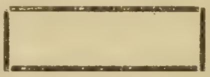
New Hampton, N. Y., Sept. 15, 1881.

Those who are troubled with an excess of pollen will doubtless profit by your ingenious plan, even though it is considerable work.

A CHEAP COMB CUPBOARD AND FUMIGATING ROOM.

The time has again arrived when all surplus honey-combs should be taken away from the bees and stored away for another season. As many like myself have not a nice tight room exclusively for combs wherein to hang them, let me tell how I do manage.

I procure a large dry-goods box which has tight joints, and one side open; place it on end in the shop, woodhouse, or even out of doors, if well covered. On the inside I then nail cleats to each side, a little below the top; then make frames of lath, ripped in two, or something similar; each end of which rests on the cleats thus:



In this frame I hang my honey-combs, and then slide it into the box on the cleats. Just below these combs I nail other cleats, on which I put frames the same, and so on down to the bottom of the box, each pair of cleats holding several frames of combs. Then having the box calked and waxed tight, I hang the door (formerly cover) on hinges with wire hooks to hold it shut. To the edges of the box where the door comes against it I tack a strip of cloth, so that when it is shut the box is almost air-tight. Thus not a very large box will hold several hundred combs.

To fumigate them, remove a few combs from the front bottom tier; take an iron kettle, put in 2 or 3 inches of coal ashes; then about a pint of live coals; place the kettle where the combs are removed; drop on to the coals about ¼ lb. of sulphur to 40 cubic ft. of space; shut the door quickly, and in one hour every worm in those combs will trouble no more. Combs treated thus about June 1st and August 1st each year may be kept any length of time, I think. They should be aired for a day or so before being given to the bees. S. C. PERRY.

Portland, Mich., Sept. 15, 1881.

Very good, friend P. We have just had quite a time with some of our combs, which we have taken from the bees in August and September, preparatory to doubling up. We placed them in the vacated house apiary, which shuts tolerably tight, but we have had to brimstone them three times, and I am afraid a sharp looking would find now and then a live worm yet. Your plan is right, and is sure to do the business, and better, perhaps, than a larger room.

MAPLE SUGAR FOR WINTER STORES.

Will it be safe to feed maple syrup or sugar that tastes and is somewhat "buddy," or perhaps a little sour, to bees? Having a quantity on hand, and bees requiring food, I wish advice before making the venture. FRANK CHASE.

Springville, Erie Co., N. Y., Sept. 14, 1881.

Maple sugar, if of excellent quality, might do for wintering bees, but as it always contains more or less caramel, or burnt sugar, to say nothing of various gummy vegetable matters, I would not risk using it. Some of the worst cases of dysentery last winter were among hives fed largely with maple sugar. As its price is nearly, if not quite, equal to that of coffee A, there would be no great advantage in it. Better use the granulated.

A correspondent asks what we think of the following, clipped from a newspaper: —

> CURE FOR RHEUMATISM.
>
> A German bee journal has an article recommending bee-stings as a cure for rheumatism. The writer's wife was afflicted with severe rheumatic pains in the arm. The husband held bees to her arm, allowing them to completely empty the poison sacs into the muscles. The succeeding night the lady, for the first time in six months, enjoyed a good sleep. The arm was swollen pretty badly the next day, but this rapidly decreased. No rheumatic pains have since been felt by the lady. Other cases of similar cures are mentioned by this writer. As the average honey-bee is always ready to perform his part of the experiment, those inclined to try this remedy may do so with "neatness and despatch."

Our friend will see by back numbers and volumes, that the remedy has not proven equally successful in all cases; still, enough favorable evidence has been furnished to attract considerable attention to the matter.

A WORD FOR THE LOCUST-TREES, ETC.

The bees have done pretty well this season. We came through the winter with 11; increased to 15; had only 2 natural swarms; one of them went to the woods. One stand of blacks, worked on Doolittle's plan, gave me one Simplicity hive, frames L. size, 8 frames to the hive, and 18 frames of comb honey; all the rest did well, but this one made the most honey. This is a great locust country. Blue thistle and white clover also abound; but the weather was so unfavorable that they worked but little on white clover. They just roared on blue thistle for about 10 or 11 weeks, but they worked harder on the locust this year than I ever saw them work on it before. If you were here you would not have to plant a locust grove for your bees, for there are from 3000 to 10,000 trees within a mile of us, and last spring they were the most beautiful sight I ever saw. Little bushes not more than 5 feet high were just loaded with bloom; but it is generally said here that if the locust blooms heavily the bees will not swarm much. What can be the cause, unless the bees block the queen at this time? All of our bees are now in L. or Simplicity hives. The Holy-Land queen we got of you is very prolific, and although the bees are a little smaller than the Italians, I am inclined to think they will be good honey-gatherers. The Italians, although they gave me only 60 or 80 lbs. of honey, they gave me two fine swarms that I would not like to take $15.00 for.

Your Home Papers are a source of pure delight here indeed. I really believe I could get along now without GLEANINGS if it were not for them.

SAMUEL D. RUTHERFORD.

Kearneysville, W. Va., Sept. 10, 1881.

FRIEND CHURCHILL'S HAPS AND MISHAPS, AND HIS QUEEN THAT "CACKLED," AND HOW IT ALL ENDED WELL AFTER ALL.

I must tell you what luck I have had with bees. Last spring I bought what I thought to be a good stock, but only one quart of bees and a lot of honey; as I did not know it would do to look inside a hive, I bought at chance. Well, it had no queen nor drones nor eggs, so I bought an L. frame of Mason, at Mc. Falls, and the bees on it, and bought a dollar queen from Massachusetts, which proved not to be mated, as it was quite early, and weather cold; but she soon got to laying in the two combs, on each side, next the division-boards; but one month passed, and the brood that was capped when I bought it did not hatch; then about that time I found my queen *dead*. But they soon had cells, 7 in number, started. Several bee-men said the brood was dead, so I went to J. B. Mason and got another frame and bees, and Italian queen, but they would not fall in love with her; so I put the frame with cells in another hive, and caged the queen with the new frame, and in two days let her loose, and she cackled and went to laying in a short time. You see, I knew nothing of bees a few weeks previous, but I did not throw the old frame away; and don't you think they all hatched all right? and now I have one hive of 8 frames, and the other has six frames nearly full of brood and honey in L. frames, of yellow and clever bees. By the way, I borrowed some of your GLEANINGS, which I read after others were all asleep, which gave me an insight. The care of bees is a great pleasure to me, and I mean to make it quite a business. I shall take a large swarm of Italians from the woods tomorrow, and hive them in L. frames, and fasten comb with strips of wood inside. Bees have swarmed well here this summer, I think.

I forgot to say, that the frame that they said was dead hatched a fine yellow queen, and her bees are very fine and gentle. I have a good smoker, and look my bees over very often, and with care, and work slowly, so I know just how they are getting along.

There are many old box hives about here, full of old black comb and moths. One man has one 15 years old, and has not taken a bit of honey nor bees from it, and the hive will divide itself, as it is nearly all moss, and leans hard the wrong way. Now, what is the use of such a course as that? I think I could have made a number of good ones, and had them Italianized, if I *am* only a new hand. You may put this in GLEANINGS if you like, and I wish to know what kind of a bee-man you think I may be in time.

E. P. CHURCHILL.

West Minot, And. Co., Me., Sept. 12, 1881.

I think you promise very well for a bee-man, friend C.; but, begging your pardon, I want to protest against you, or any one else, saying a queen was sent you that was not fertilized. As queens often refuse to lay for a week or more after a journey, no one has any means of knowing; and it is a hard imputation against the honesty of the breeder. Will you not please bear it in mind, my friends?

MOLDED FOUNDATION.

The sample of "thin molded fdn. for comb honey" you mention on page 426 came from us, and was made upon our new plaster fdn. mold, the casts of which were taken from patterns of very perfect and thin fdn. received from C. Dadant & Sons. I believe I sent you my price list, containing samples of both thick and thin fdn. I have used the Dadant style for both, but like the D. S. Given equally well for brood combs. My new metallic molds will work as rapidly and perfectly, I think, as the plaster. They are moistened by means of a pad made for the purpose. I hope to furnish them within two months.

OLIVER FOSTER.

Mt. Vernon, Linn Co., Iowa, Sept. 19, 1881.

QUEEN-CELLS NOT ALWAYS AN INDICATION OF QUEENLESSNESS.

I have been wanting to write to you before this, but was afraid you would place me in the Growlery, as I had nothing pleasant to write. I am one of your A B C scholars, and a poor one at that. I received 2 queens from Mr. Hayhurst, which I introduced all right. About fifteen days after, I found her in there all right, and the combs well filled with eggs. When I looked again the other day to see if her bees had hatched out, I found that they had started queen-cells and one already sealed up, which made me believe that they had killed her. The other one is all right. Now, what do you think made the bees kill their queen, after being in there about 18 days? **F. R. Leifeste.**

Mason, Mason Co., Tex., Sept. 9, 1881.

Friend L., your queen may be there still, all right; for you will see, by back numbers, that it is not a very rare thing for bees to raise another queen while they have a good laying one, and colonies that will keep doing this are especially valuable. Whenever you find cells started, with plenty of eggs in the hive, you may be pretty sure the old queen is somewhere around. Bees do sometimes, however, especially in the fall of the year, when little honey is coming in, kill a queen and rear one of their own, even after she has been laying a week or two. The only remedy I know is to feed them a little every day until all hands are in a prosperous condition, and feeling pleasant and friendly.

Humbugs & Swindles

Pertaining to Bee Culture.

We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.

I RECEIVED some books of a certain N. C. Mitchell, of Indianapolis. I suppose he would try me as he did many others. My father sent him $15.00 for a honey-extractor, etc., but received only a few old boards, worth 50 cents, as my brother has told me. I will send you a few of the books to let you know what Mr. Mitchell has to say about you, and I hope you will answer the man in Gleanings, from A to Z.

In regard what Mr. M. says of queens, I have to say as much in *favor* of yours. The tested queen received 4 or 5 years ago, and a dollar queen later, were real beauties in every respect; and the progeny of the dollar queen are *red-clover bees* in the best sense; very gentle, large, and industrious. I am certain I would not give that dollar queen for a $15.00 queen of M., if his bees are no better than his writing. Our bees are doing well. **P. Stephen Stenger.**

St. Meinrads, Spencer Co., Ind., May 19, 1881.

Many thanks, friend S., for your warm championship of my poor self. I do not believe there is any need of any answer to what Mitchell says. His own actions are answers enough. It seems to me your father did unusually well in getting even old boards for his $15.00. All of Mitchell's circulars are sent to me as soon as out, by different friends, and so are almost all other suspicious circulars in the bee business.

TOBACCO COLUMN.

I HAVE used tobacco for years, and have concluded at last to accept your offer and quit; so, send me such a smoker as you would use, and I pledge myself that, if I use tobacco again, to so inform you, and at the same time pay you for the smoker sent me, and four others to be given to some others who can be induced to quit the filthy habit of using tobacco. It isn't the smoker that I care about—no, sir! I expect to see the time in the next 4 or 5 weeks when I would give a dozen smokers if I had not pledged myself. I expect nature to make a strong demand for the weed; but I mean to conquer, and this promise to you, I think, will help me, together with my pride in the power of my will. So, send along the smoker, and I will let that do my future smoking for me. **J. E. Pond, Jr.**

North Attleboro, Bristol Co., Mass., Aug. 2, 1881.

I have been a slave to tobacco for over 30 years; have been a reader of Gleanings 3 years. Some time in January I quit chewing, but have not quit smoking yet, but intend to soon, with the help of God. I do not want you to send me a smoker to quit, but I thought it might encourage you to know that you were doing some good, even when you don't send smokers. The Home Papers have helped me a great deal in my Christian life. They strengthen my faith in prayer to Almighty God. I know that God will answer our prayers if we pray *aright*. Remember me in prayer to God, and ask him to help me quit tobacco entirely; also every thing that is displeasing to him. Go on with the good work; and may God bless you abundantly, is the prayer of your brother in Christ. **David Pratt.**

And it does encourage me, friend P., more than you know, perhaps. I have, as I have often told you, felt that God was guiding this department, and your kind letter shows how he is guiding it. Hold on to his strong arm; look forward and up, and never look back, nor even *think* back.

Notes and Queries.

HONEY REPORT FOR 1881.

COMMENCED in spring with 26 colonies; increased to 62; extracted 1633 lbs. comb honey; in sections, 100 lbs.; total, 1733 lbs. Used no separators with starters of pieces of comb. Have bought all my fdn. of H. A. Burch, of South Haven, for 3 years, which proved satisfactory.

Home, Mich., Sept. 15, 1881. **J. Chapman.**

I have taken over 300 lbs. of honey from my bees this summer, and had only 4 swarms in the spring.

New Woodstock, N. Y., Sept. 16, '81. **O. C. Morse.**

We sold the rest of our honey last week, at 12 cts. — some 4000 lbs. We got 105 lbs. to the hive.

Strathroy, Can., Aug. 15, '81. **J. Rutherford.**

A GOOD RECORD.

Please discontinue my name in the $1.00 queen line, as I have sold all I have to spare this fall. I have filled all orders up to date, and I wish to step out of the ranks till another season. If anybody has not received the worth of his money from me, I am ready to make amends. **L. W. Vankirk.**

Washington, Pa., Sept. 12, 1881.

BUTTER-WEED.

Inclosed please find a package of seeds which we call butter-weed. It grows in abundance on our alluvial meadows, blooming in the fall, and is the greatest honey producer that we have.

HENRY BASSETT.

Salem, N. J., Sept. 9, 1881.

I received a queen in place of the missing one on Friday last. I have her in the hive now; she was a beauty. I had good luck this time. I lost but one out of the dozen. They are laying finely. I feed the bees a little while introducing, and I think it reconciled them a little; but the Peet cage, I think, had more to do with it. I think it is "boss."

J. D. HUTCHINSON.

Windsor, Mercer Co., N. J., Sept. 13, 1881.

YOU CAN'T ALWAYS TELL BY THE LOOKS HOW FAR A TOAD CAN JUMP.

The last queen that you shipped me arrived in good order, and I was very much pleased with her. The queen that I did not like turned out to be a very fine one. She has her hive full of as fine bees as I ever saw. The last one has young bees also, just as good as I want them. I was too hasty in saying that the first one was a hybrid. It won't do to judge them by their looks.

JOHN W. GRUBB.

Gainesville, Allen Co., Ky., Sept. 7, 1881.

BUCKWHEAT.

I saw in Aug. GLEANINGS that you were short of silverhull buckwheat for seed. If you should want any from Canada, I think I could send you about one hundred bushels, or perhaps more, for about 70 cts. per bushel, bags included. It is all from the seed I got from you two years ago.

J. R. TENNANT.

Richmond, Oxford Co., Ont., Can., Aug. 15, 1881.

[We think the freights and duties would prevent our using the buckwheat, but perhaps some of our readers may be glad of it.

The bee-keepers in this vicinity have again "rallied to the standard" since the great fatality of bees last winter. Many who lost all their "seed" have not yet given up the "ghost." Those who love the beautiful in nature have purchased colonies to take the place of their predecessors. Of the 30 colonies which brought sunshine and recreation to our homestead the previous season, but one lone colony remained to tell the story; and its family record was "blurred" with the words, "Dead, dead, dead." With careful attention, we have increased to four by natural and artificial swarming.

E. J. HINSHAW.

Lynn, Randolph Co., Ind., Sept. 10, 1881.

QUEEN LAYING.

We have an Ohio lady settled on our island at last. She reached here Friday, Sept. 2, at 4 P. M. Hers was a funeral cortege, as her escort was dead. Her ladyship was the only survivor. At once I placed her in a queenless colony. Next morning, Saturday, found her out and balled. Recaged her and fastened cage firmly to comb with transferring wires. Sunday yet in the cage; Monday morning [illegible] her bees in the cage, but no queen. I soon found [illegible]r whose majestic step showed her royal lineage, [illegible] showing a great fondness for their new mother [illegible] a persistent effort to be near her.

JAS. A. WHITE.

[illegible]orgiana, Brevard Co., Fla., Sept. 5, 1881.

IMPROVEMENT IN APPEARANCE OF QUEENS AFTER INTRODUCING.

The queen came all right, but the bees with her were dead; have got her introduced all right, and she is a beauty. She is one-third larger this morning than she was yesterday morning when she came.

Pittston, Pa., Aug. 13, 1881. J. B. MOSIER.

[I have given the above to induce some of the friends not to be too hasty in condemning queens when first received, especially after a hard trip.]

PROMPTNESS.

I don't know that I want to be put into the Growlery, but I can't have any patience with those who advertise, and then are so very slow about filling their orders. I have ordered of five different parties who advertise in GLEANINGS, and in only two cases have they been decently prompt in filling their orders. I don't mind their keeping my order one week; but where the time lengthens into four weeks, there is certainly something wrong. Either they should not advertise, or they should keep a stock so they could fill their orders.

GEO. A. DEMING.

Amboy, Ill., Aug. 13, 1881.

One of the queens was pure, the other hybrid. I bought five queens this season — 2 from you, as above, 2 each from two other men. Four out of five hybrids. How does it come? Are queen-rearers careless, or are black bees in the ascendency? Bees seem to be gathering honey fast, notwithstanding the drought. I think they get it from smartweed, as there seems to be no other source.

S. C. LYBARGER.

Ganges, Ohio, August 25, 1881.

[I am sorry to hear so many dollar queens prove hybrids. Those we have bought and tested in our own apiary seem to turn out more hybrids this year than ever. It is somewhat owing, perhaps, to the way in which every thing in the shape of a bee-hive, that wintered through, has been saved and made the most of.]

EGGS THAT NEVER HATCH.

I send you a fine Italian queen; she began to lay on the 10th day, July 1st, 1881, in full colony, and has been laying ever since, but *not an egg has ever hatched*. There are no drones in the hive. J. B. Brogan raised several queens of same kind last season.

S. W. MORRISON.

Oxford, Pa., Sept. 12, 1881.

[Such queens are found once in a great while, and have been noticed in our back numbers. I do not know that we ever had more than one, and her eggs had a rather shriveled appearance. It seems a little strange that your neighbor should have had several of that kind. Absence of drones should produce only drone-laying queens.]

My bees began about July 20 bringing in pollen of a greenish-yellow or yellowish-green color. The honey smelled very strong. Just at night we could smell it 20 or 30 feet from hives. They worked on it through the first week in this month. From the description, what do you think they are working on?

[I can not suggest what your bees were working on, friend H.; but if I were you I would follow them and find out.]

Does a queen that hatches i[illegible] 9 days differ in shape from one that hatches [illegible] or longer?

[A queen hatched from la[illegible] old before it is started for a queen, has much more the appearance of a worker, and we sometimes find them so nearly like a worker that it is difficult to decide they are queens at all, except by the attention the bees give them.]

Bees have done quite well here this summer. I look for another bad time the coming winter, as they are filling their combs too much with pollen.

E. D. HOWELL.

New Hampton, Orange Co., N. Y., Aug. 16, 1881.

[Perhaps it would be well to remove the combs containing most pollen, before feeding up for winter.]

I would like to know what make and grade of grape sugar Mr. D. H. Tweedy feeds his bees, and if his bees do not carry some of it out of the hive when he feeds it dry?

[I may be mistaken, but I think it was the Buffalo A that he got of us. I have never known bees to carry *grape sugar* out dry.]

Will sweet clover and figwort seed grow if thrown in the grass on the roadside?

[Sweet clover will often do well, scattered by the roadside; but the figwort will not make its way to any extent without cultivation and protection.]

Can basswood be grown from the seed, and how is it to be planted?

[Basswood is very difficult to grow from the seed. Better get small trees from the forests.]

Do catbirds and blue-jays catch bees?

E. D. HOWELL.

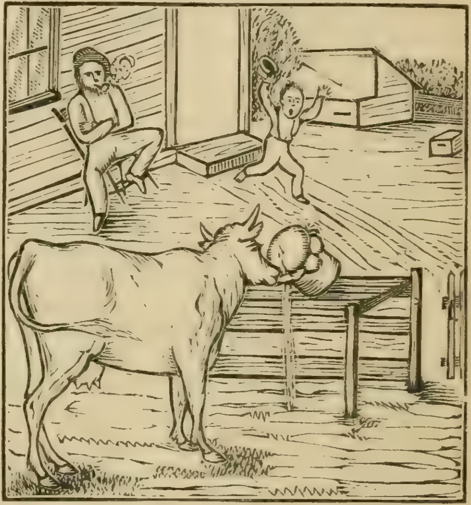
New Hampton, N. Y., Sept. 15, 1881.

[Blue-jays most assuredly catch bees, and, if I am not mistaken, catbirds have been tried and found guilty of the same offense. Shoot them and examine their crops. If you find any bee-stings, you are sure it was worker bees and not drones they consumed.]

MR. MERRYBANKS AND HIS NEIGHBOR.

> Fear not, Daniel: for from the first day that thou didst set thine heart to understand, and to chasten thyself before thy God, thy words were heard.—
> DAN. 10 : 12.

IT was Saturday. John's father sat out by the house, smoking as usual. I have mentioned, that they had secured a small amount of honey from their bees, besides increasing to get bees to cover the empty combs. Well, John's mother had, by the aid of an extractor, also secured a stone crock full of most thick, beautiful, crystal, basswood honey, which she had purposed saving for family use. However, as her husband was out of work, or at least thought he was, there was very great need of a little cash to supply the needs of the table, and to get even clothing to make the children decent, when they went to Sunday-school. As a last resort, she had decided to sell this crock of nice honey, and so John had been up to the grocery with a small sample of it. The grocer offered 16 cents per lb., in consideration of its being extra nice, and because the dry weather had made not only honey, but fruit and all kinds of sauce, very scarce. As the crock was quite heavy, friend Merrybanks had volunteered to take it up town, if John would set it out by the gate, where it would be handy to set into his buggy as he came along. A white clean cloth had been tied over the top to keep out dust; and as John's father sat in sight, nobody seemed to think but that it was safe enough. It was not many minutes, however, before a sleek-looking cow of inquiring disposition came along. She looked this way and that, as she came along the road, and finally ventured cautiously to walk slowly up and smell of the crock and its contents. She seemed satisfied with her investigations, apparently, for after one or two sniffs she wound her tongue around a loose corner of the cloth, much as she would a nice tuft of grass, and, giving it a dextrous pull, tipped crock and contents down on to the round hard stones below. I think I will just give you a picture of that cow. Here it is:—



THE COW AND THE CROCK OF HONEY.

John's father saw her, from the first; but his tobacco had so stupefied his senses, driving away dull care, I suppose, that it did not occur to him she might do any harm, until the crock was down and broken. Now he roused up, and came out swinging his arms, shouting,

"Whay! go 'long there, you old brute!"

His cries brought John and his mother, and she, with tears in her eyes that she could not keep back, made an effort to save some of the honey with the dirt, by scraping it into a piece of the broken crock. Just at this crisis friend M. and his wife came up in the buggy, and while John's father still stood by smoking his pipe, friend M. was out in an instant; and not until every particle of earth or stones containing a drop of honey was scooped up, did he stop to even talk about it. A good swarm of bees was raised up, and an empty Simplicity hive placed under them. Then a second Simplicity hive was placed over the colony, and the pans containing the dirt and honey were placed in this upper story. All of the stones and lumps of earth that could be handled were placed on the frames. As the bees licked off the honey, the dirt crumbled and fell through to the bottom hive; and finally the whole contents of the pans were turned over on the frames also, fresh combs being given the bees as fast as they needed more room. The honey was eventually saved, but it took several days to get it done, and its flavor was spoiled for any thing but bee food. Had it been sold at the grocery, each pound of honey would have bought granulated sugar enough for two pounds of better and more wholesome food for the bees. After the honey was disposed of, friend M. gave them a good-natured lecture on carelessness. His wife ventured to suggest that accidents would sometimes happen, any way.

"But, my friends, accidents, the greater part of them, need not happen."

"Yes," chimed in John's father. "If Uncle Billy, the rich old curmudgeon, would keep his cows shut up, instead of roaming the streets, preying on the property of poor, hard-working men like myself, there would not be such accidents."

Uncle Billy was the rich man of the neighborhood, and it was talked about that he let his cattle run in the streets when the grass got high, presuming that no one would interfere, just because he was rich. Mr. M. therefore began as follows :—

"Look here, neighbor; it is quite likely that Uncle Billy has his faults, like all the rest of us; but it is a very bad way to get into, of complaining of our neighbors when any thing goes wrong. It is a great deal better to form a habit of shouldering what seems to us to be a little more than our share of every such transaction. Talking about neighbors' faults seldom makes them any better; but talking about our own sins and shortcomings, in the proper spirit, almost always brings about more or less of reform."

"But, neighbor M., you don't pretend to say that we were in any way at fault for the cow being in the street and pulling the crock of honey over ?"

"I do mean you were considerably at fault in setting any thing so valuable and fragile in any such exposed public place. It is true, I never should have thought of a cow being in the street, nor of her taking any such mischievous notion into her head; but I should have had a sort of instinctive dread of leaving that crock standing in that way, outside the fence, and this same feeling would have prompted me to put it in a place of safety, or ask somebody to watch it."

"Father sat right in plain sight of it, smoking his pipe, when I put it there," suggested John, who, human like, had a sort of fancy for shoving the blame off on somebody else, even though that somebody else was his own father.

Friend M. looked at the pipe, and then at his wife, in a sort of undecided way, as if he were questioning within himself whether it would be well, or do any good, to attack again that old subject of tobacco, but evidently concluded to risk it, and proceeded,—

"Neighbor, will you pardon the liberty, if I say a word more about that pipe of yours ?"

John's father good-naturedly removed the pipe from his mouth, and, holding it off a little, while he contemplated it with a smile and a sort of twinkle in his eye, said,—

"By all means, friend M.; say any thing about the *pipe* you choose," seeming to intimate that, so long as he blamed the pipe, and not himself, it would be all right. His friend, however, seemed to have no purpose of letting him off in that way, for he went on,—

"Well, what I wished to say was this: that, had your senses not been dulled by the fumes of that pipe, you would have seen that cow in time to have frightened her away, and thus saved all this honey your wife has thought so much of."

Friend M. here stopped abruptly, and began feeling in his pockets, first one and then the other. Finally he stood up and began fumbling in his coat-tail pockets. At this crisis of the proceeding, old Dobbin evidently thought they had talked long enough, at least on one subject; and, deciding that further forbearance had ceased to be a virtue, with sudden vehemence made a vigorous push to go on. The effect was, in spite of Mrs. M.'s efforts to the contrary, to throw our rotund friend violently backward. In his efforts to save himself he stuck out his feet, but, alas! they did not quite reach the dash-board, and by the time he was fairly on his back on the seat, his feet stuck straight up in the air. His feet and ankles, although without question highly useful to himself, at least, were so far from being ornamental that, in spite of the evident danger, the children burst out laughing; and as his good wife, while she held old Dobbin with one hand, took the other and pushed the aforesaid feet and ankles down into their proper position (thus bringing him straight up on the seat), the rest joined heartily in the laugh also. Even John's mother laughed through her tears at his queer, surprised look, until she almost cried again; and then when friend M. joined in, the rest took another start, until old Dobbin looked around to see if it were really true that everybody had gone crazy, when there was *certainly* nothing to laugh at, at all. Honest old Dobbin had his views of the fitness of things as well as other people; and the oats at home that he would have had long before this were to him more sensible and substantial than any thing that all this talk amounted to. If the truth were told, he had played a more important part in the morning's proceedings than any one there, except John's father, was perhaps aware of; for at the disputation about this tobacco, John's father had begun to be violently angry; after the laugh, however, he so far forgot it that he was the first one to ask for that wonderful something that was to come out of the coat-tail pocket.

"Why," said friend M., "here it is. It is a little pamphlet, sold for 3 cents by Health Reformer, Battle Creek, Mich., that I wish to read from." Bidding Dobbin be quiet, he adjusted his specs and read as follows :—

TOBACCO-USING PROMOTES CHEERFULNESS.

Tobacco stupefies, intoxicates, narcotizes; if this is cheerfulness, then we may indorse the lines of the poetic lover of the article who sang,

Sublime tobacco, which from East to West,
Cheers the tar's labor and the Turkman's rest.

Deprive the tobacco-chewer of his quid, or the smoker of his idolized pipe, and mark how soon his cheerfulness disappears. How suddenly he awakes to all the perplexities and irritations of life, like a person awakening from sleep.

The drunkard feels happy while sipping his bowl

> of steaming sling; but how does he feel the next morning after a "spree"? A more wretched creature is scarcely imaginable. The tobacco-user does not find his real status so often, because he is *drunk all the time*, and thus mistakes his comfortable feeling for cheerfulness. A very low grade of enjoyment.
>
> ### IT IS THE POOR MAN'S ONLY LUXURY.
>
> Would-be philanthropists put in the plea for tobacco that it is the only luxury which poverty allows the poor laborer who toils for a daily pittance. With tobacco he feels contented with his lot. To him it is food, raiment, riches, and contentment, for it renders him oblivious to the lack of any and all of them. How cruel, then, to take from him such a boon!
>
> Suppose all men were rendered thus stupid and insensible, incapable of aspiring to any condition higher, nobler, or better, than that in which circumstances or fortune placed them? How soon would complete stagnation ensue! How soon would all progress cease! and how quickly would the world relapse into the barbarism of the Middle Ages!

As he got to the end, Dobbin shook his head and made such a vigorous effort to go on, that it was hard to keep him still; but Mrs. M., to everybody's surprise, declared that *she* had a word to say.

"By all means, let us hear it," said they all.

"It is just this. I fear my husband has given you the impression that we never have any accidents in our home, and that all he does is always all right, and that he never does careless or thoughtless things. John, will you please tell them about that nice case of sections you had picked out with so much pains, to take to the fair?"

"There were 48 sections, and they weighed 38 lbs.;" and he stopped there, with a sort of sly twinkle in his eye.

"But you want to be honest, now, and go on and tell the rest."

"Well, they were very nice and straight and true and white and perfect."

"Yes; but go on and tell it all."

"I didn't get the first premium."

"Now, that isn't frank and honest. Tell them why you did not take the premium."

"I concluded not to take them to the fair."

"Now look here; if you do not tell it straight, I will."

"Well, the cover got left off, and the bees got in."

"You mean, that you left the cover off yourself, and—"

"Well, have we not got all the honey in the hives?"

Dobbin here concluded the rest might do as they chose, but that *he* was going home; and off he went, and nobody stopped him this time.

John's mother felt sad during the day; but under it all seemed to be a sort of bright something — something like a promise that made her light at times, in spite of herself. Toward night, a neighbor brought her a new bright half-dollar for some washing she had done; and as she had been wondering how they should get the means to purchase some butter needed during the Sabbath, she gave her husband the plate and asked him to get it for her at the grocery. A crowd was lounging about as usual Saturday night, and he, instead of doing his errand and passing on, stopped to hear what they were saying. The talk seemed to be on the amount of beer a man might drink at one time. The keeper of the grocery-store was evidently quite an interested listener, for the subject seemed to promise to him the sale of quite a lot of beer. The doctor said he could drink three glasses without trouble. The shoemaker said he would drink four if any one would pay for it.

"Suppose you fail," said one.

"Then I will pay for it myself."

"And drinks for the crowd?" said another.

The talk then went on, and banter after banter followed until the doctor said he would drink eight glasses if any one would pay for it, and drinks for the crowd; as is usual, no one of those present had any money; but one of them, noticing the half-dollar our friend had in his fingers, whispered,—

"Take him up! He knows he can't do it. Why, it is an utter impossibility. He won't hurt himself; let's see the fun."

Poor, weak man! Thinking, of course, there was no chance of losing his poor wife's hard earnings, he was coaxed into it, as many another weak man has been. I presume he had forgotten the little text his children had been repeating about being coaxed by sinners.

> My son, if sinners entice thee, consent thou not.—PROV. 1:10.

The doctor, with a self-complacent smile, stepped up and said,—

"Gentlemen, here is to your health. That is one glass. And that is another," and so on with the whole eight. The grocer was careful to set out only what beer the half-dollar would pay for. I am glad to say, to the credit of John's father, that he did not drink any. What should he do? How could he ever take that empty plate, and go home facing that mild, patient, blue-eyed wife of his, and tell her he had fooled the money away she worked so hard and wearily for, just to see one man make a brute of himself?

He wisely concluded to go home and tell his wife the whole truth, and ask her to have faith in his resolution to keep entirely away from the whole lot of such companions in the future. Although there was a tear in her eye, she told him to let it go and never mind; that if it resulted in his holding aloof from that class of men, it was probably a half-dollar well spent. Her kindness was the severest blow of all. He could have borne scolding and fault-finding far better than this treatment. To use one of his own expressions, it cut him up terribly. He thought of new resolutions, and of what his friend had said about his tobacco. He thought how self-denying his wife was, and, for that matter, his whole family, and of how much comfort his tobacco money would procure for them all. "Oh if I could only break off!" he thought. He had tried before. In fact, he had made many resolutions, but none had ever been kept very long. In his inmost soul he felt that it would be folly to promise any more. He knew it was actions that were needed, not words. Where did his wife get her new-found strength? Had that Bible he had so often seen her reading, of late, any thing to do with it?

He knew its teachings were right, and what he needed; but he had little faith that he could ever live up to any of them. Could God have any patience or care for one so weakly wicked as himself? He went and sat out by the door. For once in the world, the thought of his pipe was distasteful. In fact, it galled him to think of it. Before bedtime, John came up to his mother's side, as was his custom, and as he remembered the events of the day, he said,—

"Don't feel bad about the honey, mother; I will try awful hard to get some work, and I will work so hard that they will all want me; and you see if I don't pay it all back to you."

The innocent, childish remark, cut him to the quick again. It seemed to occur to him all at once, that God had put into the mouth of his little boy the very words he wanted spoken to him. He moved out among the bee-hives and sat down there. Even the hum of the insects toiling inside their hives seemed a reproof to him. It seemed plain to him now why he had not been sought after when hands were wanted. He was not a profitable hand. His whole end and purpose had not been to serve his employer and get the work along, but rather to have the hours pass until quitting time. His own work, even, was neglected and undone. Some thing seemed to say to him that people could hardly expect him to work faithfully for them when he was too lazy to do his own work. His whole past life seemed stretching out before him. The thought of it and the sight of it galled him until he could bear it no longer. Down on his knees he knelt, alone in the night. It was not much of a prayer; but the words, "God have mercy on me a sinner, and help me to be a better man," were carried above, and recorded in the book of life.

The minute he rose to his feet, a fear seized him that this would pass away, like other resolutions, and this caused a desire to spring up that he might have some thing given him to do at once, right there in the night. God heard the thought.* and as quick as a flash his scanty woodpile rose up before him. Straight to it he went at once, and before 10 o'clock that Saturday night every stick was cut up into nice stove lengths, even including the hard sticks that John had chopped at in vain, and tried to split for a year back. After that the yard was raked clean and smooth, a great portion of the wood carried in, and the rest piled up nicely for the Sabbath. His wife supposed it was done because he felt so much ashamed at the loss of the half-dollar, and of course she felt happy to see him show his penitence in such a practical way. I need hardly tell you he was happy, as well as tired; but he said very little, for the new guiding spirit seemed to say, "Let actions speak, rather than words."

Sunday morning he was up before sunrise, and, instead of the morning pipe, he proceeded at once to make himself as clean as possible. As he did not forget to include his tobacco-stained mouth in the general scrubbing, it took the best part of an hour. Such clothes as he had were scrupulously clean, and after he had them on, ready for church, he really looked fit to be kissed, not only by little Mary, but by his wife too, even though the recollection of yesterday was still fresh in the mind of both. I tell you, a nice clean papa, clean both in body, soul, mind, and spirit, is seldom unappreciated by any child. Well, our friend, while resolving that the Sabbath was to be a day of rest from the labors of the week, felt that God did not intend that it should be a day of idleness for him, at any rate. He began looking about the house for some lesson-helps for the coming Sabbath-school; but as all they had in the house were for juveniles, his wife suggested that he might go over to friend Merrybanks for some thing that would prepare him better for the Bible-class. She seemed instinctively to feel his present longing for some thing to do was the promptings of the voice of God. As he made known his request with a happy, good-natured smile on his face, friend M. could not help thinking, "Except ye become as little children, ye can not enter the kingdom of heaven." With his wife's little Bible, and the paper that had been loaned him, he was so busily engaged he hardly thought of breakfast at all until summoned by a hand laid lovingly on his head. Fresh eggs, with mealy potatoes, soft light bread, and, as sure as you live, a plate of nice yellow butter. Did God send that too? Across the table, up on the mantle, in plain sight, lay that old pipe.

> And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul.—GENESIS 2:7.

Truly was he made "of the dust of the ground;" but since the moment he had knelt out in the darkness the night before, God had been breathing into his soul "the breath of life."

Bee Botany.

OR HONEY PLANTS TO BE NAMED.

INCLOSED find parts of a honey-plant that I would like to know the name of, and how to raise it by cultivation. The plant grows to the height of 3 feet, and is found growing wild in the timber, and blossoms from middle of July till last of August, and bees work on it all day, and more than they do on the Simpson honey-plant (that also grows wild here). I tried to grow it from the seed, but it did not come up for me. JACOB SILLS.

Cedarville, Ill., Aug. 5, 1881.

Answer by Prof. Beal.

This is *Veronica Virginica*, Culver's root, Culver's physic; common on bottom land, and in rich woods. It belongs to the large order *scrophulariaceæ*, figworts, which also contains mulleins, linaria, or toad flax, snap-dragon, figwort (*scrophularia nodosa*), which some bee men have recently called Simpson bee-plant; also pentstemon, mimulus, speedwell, gerardia, lousewort, and others. PROF. W. J. BEAL.

Agricultural College, Lansing, Mich., Aug. 11, 1881.

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*And it shall come to pass, that before they call, I will answer; and while they are yet speaking, I will hear.—ISA. 65:24.

Our Homes.

So fight I, as not beating the air: but I buffet my body, and bring it into bondage: lest by any means, after that I have preached to others, I myself should be rejected.—I. COR. 9:26, 27, New Version.

AS I sit down this morning to write Our Homes, it is with a feeling of sadness in my heart, because of the news just at hand, that our President is dead. Sadness and gloom are resting over our nation. Had he died of a natural sickness there would have been sorrow, but not just the kind of sorrow we have now. Wickedness, iniquity, and crime, are in our land and in our midst; and although we call ourselves a Christian people, it would almost seem as though the one who accepts the office of chief ruler of our land, even by the wish and voice of the people, accepts it at the risk and peril of his life.

In our Sabbath-school of late we have learned how God, in olden times, destroyed nations for their wickedness and disobedience. Most of us well remember how God punished us during our civil war, by taking the life blood of our firstborn; and how do we know that some great calamity will not sweep our land again, if this stream of evil is not in some way arrested? A few weeks ago I visited the Reform School at Lansing, Mich. Over 200 little boys were being cared for by the State, because their parents could not manage them at home. As I scanned the faces of them, one after another, I felt like thanking God that the authorities of the State were doing so well what the parents would not, or thought they *could not*, do. What are we doing, as a people, to restrain crime, and what will God do with us if we are too lazy, listless, and *selfish*, to do any thing? We have many times discussed this matter here in these pages, and most of you probably remember the incident given in our February number, in regard to the men who were robbing a turkey roost. What shall we do with crime, and what shall we do with criminals, when we meet them defying the laws of God and man? Here are two instructive letters in regard to the matter:—

Friend Root:—Your questions at the close of the Home Papers in the February number of GLEANINGS, in regard to what Mr. Baird should have done on the occasion of having his turkey roost robbed, were intended, I take it, to bring out a principle, which principle I conceive to be involved in the following query: Whether it is better to use force or moral suasion in dealing with the violators of the law.

Had Mr. B. attempted the latter, had he gone out, for instance, and read a chapter from the Bible, and expostulated with these thieves on the sinfulness of their course, it is altogether likely that they would have laughed him to scorn; and if they were persuaded that this would be the only power which he would oppose to their unlawful designs, they would doubtless have despoiled him of his turkeys before his very eyes.

Further, if any class of men in the community should act upon the principle of opposing only moral suasion to the selfishness of their fellow-men, it is clear that the unprincipled would flock to them from every quarter, and quickly strip them of every thing they possessed. In the present condition of human nature, society would speedily be hopelessly disorganized if the higher class of minds should undertake to deal with the criminal class on the principle of moral suasion alone. On the other hand, the question arises: How far should force be applied in protecting ourselves from the incursions of the lawless? I reply, to the extent of completely protecting ourselves and our property, and placing the criminal entirely in our power.

Had Mr. Baird quietly slipped out of the back door and stirred up neighbors enough to have surrounded and captured these thieves, he had placed himself in a position where his moral suasion would have had the best field for its activity. When a man stands helpless before us he is in the best situation to appreciate kindness from our hands. Rude and selfish minds look for rudeness and selfishness from their fellow-men, and when kindness and good will are manifested toward them they excite in their minds either contempt or love. If their moral preceptor is not a person who can command their respect, they will treat his teachings with contempt. If, on the other hand, they feel that he is superior to them, or is in a position to successfully oppose force to force, and selfishness to selfishness, yet out of the goodness of his heart treats them with respect and kindness, the nobler attributes of their souls respond like an echo.

I have heard ministers say that their feelings were often shocked at the rudeness with which they had seen children in the mission schools of our great cities treated by their spiritual teachers. Where, according to their idea, love and gentleness should abound, they had seen rude force applied to compel respect and obedience.

The mission teacher, however, had learned from experience that among the class with which he had to deal were many whose lower natures, by inheritance and wrong training, possessed such a fearful ascendency over their higher natures, that appeals to the latter could scarcely awaken any response till the energy of the former had been subdued.

Without proceeding further, I think my position in regard to the midnight assassin will be clearly understood. It is this: Give him to understand that you are ready to oppose force to force in the defense of yourself and property; to strike him down, or even to shoot him, if necessary; but when he is helpless in your power, then let your good will toward him be shown by binding up his wounds, and using your moral suasion to turn him from the evil of his ways to righteousness. JAMES MCNEIL.

Hudson, N. Y., Feb. 11, 1881.

Within the past few months I have been led to feel the force of much that is said in the foregoing; yet I think our next friend supplements well the letter with a timely caution:—

AS YE WOULD THAT MEN SHOULD DO TO YOU, DO YE ALSO UNTO THEM LIKEWISE.—LUKE 6:31.

BE NOT OVERCOME OF EVIL, BUT OVERCOME EVIL WITH GOOD.—ROM. 12:21.

Friend Root:—Your comments on the communications of Messrs. Baird and Stites suggested the idea of sending you a few thoughts on the same subject. With the spirit of both the communications, and your comments on the same, I am well pleased.

There are, however, certain moral principles underlying the subject of self-defense that are not generally understood: hence the frequency of manslaughter in defense of person and property.

Life is the most inestimable boon the Creator has bestowed on man. No amount of property can equal it. "All that a man hath will he give for his life." It is, then, too precious to be taken in defense of private property. There is only one case that the law of God will sanction, in which it is right for a *private* individual to take the life of another. That case is, when one individual assails another with hostile attempt, the individual assailed has the right, in self-defense, to shed the blood of the assailant. But before he possesses this right, he must be convinced of the deadly intent of his antagonist, and be driven to the necessity of either losing his own life, or of taking the life of his would-be assassin. The right of taking away life in any case, properly belongs to society in its organized capacity —civil government; but in the above case, always a case of emergency, the person assailed has no alternative. He can not wait for law. He must act, and act promptly, or else lose his own life: hence he becomes, for the moment, judge, jury, and sheriff.

The case referred to by Mr. Baird, recorded in Exodus 22:2, on which he has given us Bishop Hopkins's comment,* is to be understood on the above principle of defense, not of property, but of life. Indeed, the quotation from the excellent author, whose work we highly prize, as given by Mr. Baird, expressly recognizes our view. But my own opinion of the passage is somewhat different from that of Bishop Hopkins. We do not think the passage sanctions intentional manslaughter at all. The passage is as follows: "If a thief be found breaking up, and he be smitten that he die, there shall no blood be shed for him. If the sun be risen upon him, there shall be blood shed for him." The manifest import of this language, which is a correct translation of the original, is, that the death of the thief was *accidental*, and not *intentional*. It being in the night, as is evident from the succeeding context, the owner, in endeavoring to repel the assailant, might accidentally deal him a blow in the dark that might terminate fatally, though not so intended by him. He would then be only guilty of accidental manslaughter, and therefore guiltless. This view finds a corroboration in what immediately follows. "If the sun be risen upon him, there shall be blood shed for him." This clearly teaches that an individual, in taking the life of another in defense of property, in the daytime, is guilty of murder. Why? Because he has every opportunity of seeing the thief, and of guarding his blows.

I have thus come to the conclusion, that the life of another should never be taken intentionally in defense of property, however valuable. The image of our Maker should ever render the life of our neighbor so sacred, that we would never attempt to take it away in defense of any earthly consideration.

In connection with this subject I will relate an occurrence that took place some three years ago in Washington County, Pa. I was intimately acquainted with the parties, and deeply interested in the case, for they were both old scholars. One of the parties, in company with some other lads, determined to pilfer an orchard of a neighbor who had some excellent peaches. Whether the other party was aware of the attack or not, I will not say. It turned out, however, that the pilfering party were discovered in the orchard and fired at with a shotgun. It was a fatal shot. One of the young men fell mortally wounded, and expired in a few moments. That shot cost the person who fired it thousands of dollars and a term in prison. But the loss of money, and physical punishment, are nothing when contrasted with the mental anguish resulting from reflection on our rashness, and the thought of having shed a fellow-creature's blood. Better breathe the spirit of Christ, and carry out the sentiment expressed in the passage of Scripture at the head of this letter. Far better to suffer ourselves to be defrauded—robbed of a few peaches, of a few pounds of honey, of a few pounds of grapes, etc., than to resort to the pistol, the bowie-knife, or poison. Let me illustrate the conduct of the Christian by the case of an aged minister with whom I was personally acquainted. Some of the readers of GLEANINGS may have heard of him, if they did not know him. I refer to the Rev. Samuel Hindman, late of Washington, Iowa. In returning from the eastern part of our country a few months before his death, he was robbed of several hundred dollars, while asleep on the train. Awaking, and discovering his loss, for he was without a penny, he *prayed* for the poor thief that had stolen his money. This was Christlike. "Father, forgive them, for they know not what they do." Let the readers of GLEANINGS, who have sustained a loss by others, go and do likewise. WM. BALLANTINE.

Sago, Muskingum Co., O., Feb. 4, 1881.

I am very glad, friend B., you have brought out this point, especially the one involved in your last incident. The idea is altogether too common, that it is right and proper to shoot one who is stealing our fruit, or our honey, if you choose; and right in the same line, there are many, even professors of religion, I fear, who think a man is justified in knocking another down, simply because he has been called a liar, or insulted in some way. In our own neighborhood, one neighbor killed another for just such a trifling matter. Am I not correct in saying that no words that can be uttered should ever induce a Christian, or even a gentleman, to strike the one who speaks them? And is not this way of settling difficulties a relic of a sort of barbarism of which the present age should be ashamed? I want to tell you a little story of my boyhood days.

You know I used to travel around to the schoolhouses, showing people experiments in electricity and chemistry, when I was eighteen years old; it was the time when I thought I must put *professor* on my handbills, or people would not come out. Well, I did not make very much money at it, or at least I didn't save very much. In fact, to tell the truth, I never saved very much at any thing. Well, I wandered out near where my brother-in-law, Mr. Gray, lived, in a rather newly settled region, then commonly called the Black Swamp. And after I had given lectures all about at the schoolhouses round there, Mr. Gray one day very kindly suggested that I should stop traveling for awhile and settle down at some more permanent employment.

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*See February number, page 97.

"Come and teach school in our district this winter; it will be a good school for you, and in the spring you will have money enough to 'go lecturing' a long while."

"But how do you know the people will have me?"

"I know, because I have applied for you already, and they will be glad to get you. I am sure you had better take it."

I accepted the offer, but was told, before I commenced, that the school had a very bad name. For several winters, the custom had been to turn the master out of doors, and then the directors always fell back on a man who was a wood-chopper by trade, but who had muscular strength enough to enforce obedience, even if he was not wholly up to the times in all the modern sciences. I did not care very much about this, for I had a sort of philosophy that, if one did his duty well and faithfully, he was not likely to get into any trouble of that kind. Besides, when fighting had got to be done, I was considerable on a fight too. Even after the school was well started, I found there was a little ill feeling toward me, because the trustees had not chosen some of the young men in their own neighborhood, and the wood-chopper, after having had a look at me, said he guessed he would have to come in before very long and take charge of the school, as he usually did, before the winter was very far advanced. I had my own views, however, and kept my own counsel. I was not, therefore, surprised when I found I had, after a month or two, gained the good will of almost every scholar. In In Our Homes, Part First (p. 20), I have told you how I made the hardest case in the school learn the multiplication-table. This achievement did a great deal for me, and pupils, parents, and directors, seemed to feel they had got the right man in the right place. I was much in the habit of playing with my scholars at noons and recesses, and Mrs. Gray (my sister) once warned me I would have trouble, if I did not preserve a proper dignity; but I assured her the scholars all thought so much of me there would be no trouble. There was, though.

I think it was some time in February that I noticed a growing uneasiness and impatience among some of the older pupils. They not only got into a habit of whispering, without much heed to whether my eye was on them or not, but they actually talked out loud. I talked pleasantly, and finally plead with them, but it did not stop. When I threatened, some of the older boys laughed. That night, in going to my boarding-place across lots, I selected a good beech whip, and before any of the pupils came next morning, I hid it under the schoolhouse. After school opened, I told them that the first pupil who deliberately and defiantly whispered, that day, would be punished. I resolved to get a very fair and plain case, but none came until afternoon. Then one of the largest and heaviest boys in the school (in fact, a much larger man than myself) whispered, and kept whispering right before my eyes.

"Lysander, you are whispering."

"Yes, sir."

"The safety of the school demands that I should punish you."

"Mr. Root, you are not man enough to teach this school, and the sooner you give it up, the better."

This boy was by no means the worst one, and I well knew it; but, as is often the case, the ringleaders had put him up to it. I reasoned with him; but the others snickered; and although he admitted I had been a good friend of his, and all of them, he still insisted that I had better give up the school. With white face, and I presume trembling limbs, I told him I should hold my place where the trustees had put me, as master, as long as any breath was left in my body, and I directed one of the boys to go out and get the whip. Unfortunately, he was so scared he did not get my directions, and came back saying he could not find it. Things were coming to a crisis. I forbade any one moving, and went and got it myself. This was unfortunate, as my absence allowed them to arrange a concerted action. I came back with the whip, and ordered him to step out on the floor. He did so, but warned me not to touch him with that whip. The suspense was painful, and I was anxious to have it over. To show him that I was not at all afraid of his threat, or his superior strength, I struck him with the thin end of the whip right across the face. With a yell of rage and pain, he sprang toward me; but as the blow of the whip perhaps slightly blinded him, I easily tripped him, and, placing my foot on his throat, demanded an unconditional surrender. As I half expected, he gave it at once, and promised to behave and obey, if I would let him go back to his seat. Had I been a Christian, I would have breathed a prayer to God for deliverance; but I knew no God then. The mental strain had been such that I was weak and off my guard; besides, I supposed it was all over, and I was conqueror. I was surprised to hear a hiss and a titter, as he, with head down, proceeded to go to his seat; but the taunts of his comrades, that could hardly be suppressed even there, were too much for him, and, breaking his flag of truce, as it seemed to me, he stepped on a low seat near, and before I could gather myself at all, he leaped with his whole great weight directly upon me, crushing me to the floor, and called to the rest to come and help, as they had promised to do. My mother told you, in Part First of Our Homes, that I as a child had a violent temper, but that it took considerable provocation to get it fully aroused. While helpless under him on the floor I heard the movement of feet, as the rest prepared to come and put me out of doors with my predecessors, and invite the wood-chopper to come. All of the tiger in me was fully aroused, and the thought that I was borne down by one who had proved a traitor to his fair promise, nerved me to a frenzy. I would have prayed, but I did not know of prayer. He, knowing he was guilty, was probably a little off his guard, especially as I seemed to have given up; but it was only to mass strength. It came, and in a second, almost, I was out from under him, and on my feet. Several were partly out on the floor.

"To your seats!" I thundered, "or I will not be responsible for your lives."

They wavered a second, but doubtless thinking it would be folly to be frightened by one little man, a boy of only 18, and they a half-dozen all about me, they hesitated. At this crisis the man under my feet called to them again to come on, and I knew I was a prisoner unless I secured obedience by one bold stroke. I raised my heel, and planted it in his face; and as the blood flew I yelled to them to take their seats again.

This is terrible, and it pains me much to write it; but it convinced the boys I was terribly in earnest, and they huddled back to their seats like a lot of frightened sheep. One of them ventured the suggestion that this would be the last day I ever taught school there.

"It may be, sir, but as it is pretty certain I shall be master here until four o'clock, the time to dismiss, I would ask you not to make any further remarks, at least of such a nature, without permission."

Lysander washed his face, and, if I am correct, we tied up a wound on his face, and then I permitted him to go home; but the rest of the scholars I obliged to remain until school was out. The next day the directors and many of the parents assembled to see what was to be done with me. It was the opinion of many I should be prosecuted for assault and battery; and from the evidence given in by the boys who were massed against me, it looked pretty bad. Cross-questioning, however, showed that their evidence was prejudiced, and finally, by the advice of an old judge, who lived near, they accepted the statement of a little girl, who told it every time alike, and could not be made to state any part differently. The judge then, in a short speech, recommended the trustees to engage me for another month longer after my time was out, because I was the first man they had found for some time who was up with the times, and couldn't be put out of doors by the boys. This seemed to turn public sentiment in my favor, and I had a very quiet and pleasant time during the remainder of the school.*

Now, friends, I have told this story all through, and I have tried hard to tell it truthfully. I have told it a good many times, to illustrate how it is, that sometimes nothing but brute force will answer. I have told it recently in the same way, and it is within only a few days that it has occurred to me that there is a sequel to that story that has never been told. You will notice, and may have noticed in going over it, that I have all the way through placed myself in the light of having been all in the right—yes, almost a hero, while the Black-Swamp boys were all in the wrong. Now, I by no means mean to justify putting schoolmasters out of doors; but in a sequel to this little story, I wish to say something in behalf of these boys. Was our civil war a necessity, and was my fight with the boys in the schoolroom a necessity? In talking with one of the best school-teachers I ever knew, in regard to the matter, he said that, while it might be that neither he nor I could have taken that school and got along without such a crisis, he thought there were men and women who would have so managed that no brute force would ever have been needed. I did not quite agree with him then, but I do now.

Here is the sequel: I told you I had a habit of being quite familiar with my scholars. Had I said with the older girls, I should have been nearer the truth. Had I taken the same pains to help the young men of that school with their lessons that I did the young women, some few of them, and been steady and true to both, and to the directors who placed me there, right along week after week, I do not think I would ever have been disobeyed. You may think I have a way of speaking of my sins, some of them, in a more severe way than they deserve. You may say it is a common occurrence for teachers to be a little partial to the opposite sex. More, then, is the need of a reform. Before the winter was half over, it was remarked, and in my hearing too, that the schoolmaster was very willing to assist certain girls with their examples in arithmetic. So far was this true, that one young lady complained to her father, because I was making myself too familiar. The father (and he was the kind old judge who took my part so faithfully at the school trial) reproved me right before the family circle one morning, while I was boarding there. May God bless him for his kindness, even to one who deserved a sharp, severe reproof! As we came around the fire, he said,—

"Mr. Root, there has just been a new law passed."

"Has there?" said I; "what is it?"

"It is," said he (and his eye full of kindness rested on me so fully that I could not mistake his meaning), "it is to the effect, that any man, either married or single, who willfully *trifles* with the affections of any girl under age, is liable to State prison for a term not exceeding three years."

Of course, I replied in a strain of pleasantry, but the reproof went home, and I respected both him and the daughter all the more for it ever afterward.

Oh that all girls were on such intimate terms with their father, that they could go to him as freely and promptly as did this one. I was effectually cured in this one direction; but as this incident was but a little before the outbreak, my reformation made but little difference. Think of it, my friends; I, a young man of fair education and ability, good connections and parentage, was employed to instruct and teach good morals to a neighborhood of boys and girls. My employers, relying on my sense of honor and uprightness, did not think of it being necessary to keep an eye on me, but paid me my wages, good wages too, for going there day by day and using those precious moments in —to put it very mildly—foolish trifling. If a boy or girl in my employ should do the same thing now that I did then, I should find it hard work to keep cool enough to reprove them. If it were my daughter and some one else, my first impulse would be to say that he needed a horsewhipping, and a right smart one too. If any one whose eye rests on these pages is or has been guilty in a similar way, let him read Christ's words on the subject, and see how far, how immeasurably far, he is from loving "his neighbor as himself." If it is *your* daughter, or *your* sister, there is a difference, you will find; ay, a *fearful* difference. Poor Lysander, when he said I was "not man enough to teach that school," *was right.*" Had he told me plainly just what he thought of the way I had been doing, and given me the pounding I deserved——Hold on! hold on! is *that* the way to reclaim sinners, my friends, even just the kind of sinners I have given you a view of? Did Jesus knock men down, or horsewhip them, or even command the earth to open and swallow them up? Lysander, if your eye ever meets this, will you and the rest of those boys and girls forgive me? Instead of setting my heel down on the face of a fellow-being,—one who was created in God's own image,—why did I not set it down a month before, on the iniquity in my own heart, and, like the soldier Paul, buffet my own body into subjection? God says, he that ruleth *himself*, and not he that pounds unruly scholars, is greater than he that taketh a city.

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* The real ringleaders in this little rebellion were the two boys mentioned in the last of Our Homes, Part II., who stole the watches. It occurred shortly after the incident above.

Why, oh why! did I, during all that winter, forget my Bible and the kind teachings of my good mother? I can not remember of going to church one single time that winter; and I think it very likely that sermons were then distasteful to me. It seems to me that, had some good and earnest Christian taken me in hand just then, and talked to me kindly and firmly, it must have stirred within me a better spirit. If there were any such, I do not remember them. Dear reader, is there one in *your* neighborhood? If not, are *you* ready to—

Go, with the name of Jesus, to the dying,
And speak that name in all its living power?
Why should thy fainting heart grow chill and weary?
Canst thou not watch with me one little hour?

And are you ready to call them back with patient love (rather than horsewhips), as in the following?

Not now; for I have wanderers in the distance,
And thou must call them in with patient love.

From that day to this I have never learned whether the law the judge laid down was a fact, or only a little pleasantry for the time being; but while I sincerely hope we have laws just so stringent, I pray God that *his* law may be so instilled into the minds and hearts of our teachers that it may shine out over a sinful world, and render it unnecessary that even one of the *pupils* should ever need reminding of this law of our land. The law did good; but oh, could I have been led to walk from that time to this, feeling the eye of Almighty God was over and above and around me, nay, *rejoicing* that such was the case, how much more might I have been worth to myself, my nation, and my God, in restraining crime!

Now, with what I have just told you in mind, and the lesson I have brought out, please go back and read those two letters again, I gave in the beginning of this paper, and see if you do not get some new ideas. What shall we do with crime, what shall we do with criminals, and, above all, how shall we stop iniquity in its first germs?

It is quite likely that, if friend Baird had gone out to those turkey thieves, and read a chapter to them then and there, it would have done no good; but was there not a time away back when friend B. might have managed to read the Bible to them under fitting circumstances? Are there no towns or small settlements near him where Sunday-schools may, or might have been organized? and is brother Baird, or you, my friend, in the habit of standing up in these schools, and reading the Bible to the boys and girls who will always be found ready to listen to this kind of instruction? Is it not in your line? Methinks it is in the line of every one who detests crime and wickedness, and hungers and thirsts after righteousness.

It has been said, that, just as sure as we get another president who is as good a man as Garfield, just so sure will he be shot down. Who will do it? Show us the enemy, and a hundred thousand strong, if need be, will be in arms in an instant. Point out the man, or banded army of men. My friends, it is no man. In this case it was no banded army of men. It was simply Satan, or the inborn sin of the untrained and unsubdued human heart. Just rally around Paul with our opening text on your banners, and you will have the enemy right before your face. On the coins of our land we read, *In God we trust;* yet I fear that in every little town in our land you will hear God's name taken in vain by the boys of our streets. Is that loyal? Would it be safe to curse our President in the same way? and would it be worse to curse him than to curse the God of our fathers? Is there not an enemy among us, at our very doors? Is not cursing the God in whom our nation trusts, openly and on our very streets, one step toward shooting down the man whom our nation delights to honor? Rouse up, ye brave, ye strong of muscle and strong of heart, and come to the fight; but let the blows be dealt within. Cease not the warfare, until we can pray, with David,—

Wash me, and I shall be whiter than snow.—PSALM 51:7.

A kind Christian talk with a young man or woman, now, may stop a fight in school a month hence, or the assassination of a president a few years hence, and possibly a great civil war a century hence. It will not do to wait until the fight has begun, or until just the eve of a crisis. *Now* is the appointed time; and, my friend, if your name is not already enrolled among those who "are on the Lord's side," for the suppression of the crime and wickedness in our land, I invite you, in his name, to come and enlist under his banner and commence the *fight;* yea, *this very day and hour.*

So fight I, as not beating the air; but I buffet my body, and bring it into bondage: lest by any means that after I have preached to others, I myself should be rejected.

THE BURCH MATTERS.

SINCE our last, a few more reports have come in of money sent for bees, and the following have reported having received queens.

I admire the way you propose to stand by the customers of your advertisers, if it is "unbusinesslike." However, I should not allow you to stand any thing I had sent *Burch*. But he has sent me my queens, and ended my account with him. What he agreed to send June 20th, I received Sept. 10th.
C. M. BEAN.
McGranville, N. Y., Sept. 12, 1881.

Mr. Burch mailed me 2 queens. I got them the 27th in good shape; only one dead bee. Please accept thanks for kind words.
H. DICKSON.
West Lima, Richland Co., Wis., Aug. 29, 1881.

Some time ago I wrote to you concerning some money sent to H. A. Burch for Italian queens. The queens were received this morning.
G. H. POND.
Bloomington, Hen. Co., Minn., Sept. 18, 1881.

I received the queen all O. K. Mr. Burch has sent me two queens, which makes him and me all square.
WM. PARMENTER.
Bean Blossom, Ind., Sept. 16, 1881.

I received a queen from H. A. Burch & Co.
Cumminsville, Can., Sept. 22, 1881. A. FRASER.

I have not heard of any bees being sent out during the past month, of any money being returned, nor of any security being given. Neither have I heard of any assignment being made. It would certainly be out of place for me to commence paying an advertiser's bills before it has been shown he either could not or would not pay them himself. No one, so far as I know, seems to think I am in any way responsible for those who were not subscribers to GLEANINGS.

THE BEE-MEN OF CANADA.

A FRIEND in Canada sends the following, clipped from the Toronto *Globe* of Sept. 10th:

HONEY AND APIARY SUPPLIES.

The advance made by this department during the last three years is prodigious. Up till the time of the establishment of the Industrial Exhibition the apiarists of Canada were represented in the Provincial and other large shows by the display of a few pounds of honey and wax, and may be one or two hives and a few supplies, the whole being usually accommodated on one shelf in the Dairy Building or elsewhere. Now the bee-men have a house of their own completely filled with articles which make it one of the most interesting sights on the ground. Several of the exhibitors have working colonies of bees on the ground, and by to-morrow a large tent, 30x44 feet, will be erected in which to display the various operations of transferring, packing for winter, doubling, and dividing swarms.

Dr. Nugent, Strathroy, a gentleman who went into bee-farming last spring, shows about 3000 packages of honey put up in attractive forms in glass, tin, and other cases. The clover, basswood, and buckwheat honey are put up separate. Dr. Nugent has now some 400 colonies, all left well supplied, notwithstanding that 15,000 pounds of comb and extracted honey have been taken away from them.

W. L. Wells, Phillipstown, makes a large show of extracted and comb honey, put up in a convenient form for sale; also beeswax, and a very simple and cheap wax-extractor, together with comb, comb foundation, apiary supplies, and a frame of bees, showing the queen, and the methods in which the insects work.

M. Rainer, Cedar Grove, shows extracted honey and comb honey of singularly good quality. This exhibitor gets his comb honey built so evenly by his use of the slit zinc partition sheet, shown for the first time here last year. The slits in the sheets are of oblong shape, a little over nine-sixteenths of an inch long, and a little less than three-sixteenths high. This admits the worker bees, but neither the queen nor the drones can pass. Consequently, wherever this perforated divider is placed the queen is confined to the frames on one side of it. The frames to which the queen has access will contain brood, but the frames which she can not reach will contain honey only, which can be extracted without interfering with the brood. It is found in practice that, when the frames in the brood-chamber are filled partly with honey and partly with brood, the bees can be induced to carry the honey backward to the honey-chamber. This is done by the simple act of uncapping the cells and returning them. This being done, the bees carry the honey away, and put it where the bee-keeper wants it. Behind the division-board can also be placed the frames for the making of the comb honey, and it is found that, by the use of the perforated sheet for backing, the combs get the regular appearance to be seen in Mr. Rainer's exhibit.

D. A. Jones, Beeton, makes a display of nearly 30,000 pounds of honey, principally in packages of different weights; about half a ton of wax; sets of packing cases designed to carry small packages without waste of space; packages of graduated size arranged so that they can be returned empty in nests of six; comb foundation imported from the States, and also comb foundation made in Canada, the superiority of the latter being plain at a glance; a centrifugal extractor, with a little improvement, so that it can be made to fit frames of any size; and all kinds of apiarian supplies.

Mr. Jones has also six frames of bees containing pure-bred Holy-Land, Cyprian, and Italian bees; also crosses from the one breed to the other. The cross between Cyprian and Italian is a very fine, strong bee. One nucleus contains an improved Italian bee, the outcome of constant selection and attention. There are also six colonies of bees complete, which will be handled and subjected to all the operations of the apiary for the instruction of observers.

Boys, let's all go to Canada.

GLEANINGS IN BEE CULTURE.
A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, OCT. 1, 1881.

WASH me, and I shall be whiter than snow.—Ps. 51:7.

S. C. & J. P. WATTS, Lumber City, Pa., send us a 6-page descriptive circular of chaff and Simplicity hives, with price list.

FRIEND OLDROYD has succeeded in getting his inks in shape so they can be sent by mail, as a powder. See his advertisement, and send to him for a circular.

WE consider it a privilege to mail a sample copy of GLEANINGS to anybody in the world; so if you have a friend anywhere you would like to have receive a copy, just write his name on a postal card and send it to us, and we will thank you for so doing.

FOUR numbers of a weekly bee journal, under the title of *The New England Bee Journal and Home Gazette* have reached us. The paper is quite spicy, and has some good articles in it. Price 75c per year. Henry A. Poole, editor and proprietor, Mechanics Falls, Me.

HONEY FROM RED CLOVER.

Neighbor Dean has just been in, and now gives his honey crop at 1000 lbs., instead of three or four hundred, as I gave it last month. About 350 of it is comb honey, and the rest is extracted. He said his bees filled sections right along in August, from the red-clover blossoms. Bees gather honey from red clover in Medina County, if they don't in other places.

All who are intending to attend the National Convention, at Lexington Ky., Oct. 5, 6, and 7, will need to set about it as soon as this is in their hands. I see by the *A. B. J.* that Mrs. Lucinda Harrison proposes an impromptu meeting to be held in the Mammoth Cave, after the discussions are over. I should be very glad indeed to attend, but I have been absent so much this fall that it seems next to impossible, and we are now just in the midst of preparing our 300 colonies for winter.

May God bless the kind friends who have written they would take nothing *from me* for the money they sent Burch. I do not want to ask release from any promise I have made; but such expressions seem to say that my attempts to reform existing evils have been approved by both God and my fellow-men. Truly can I say with David, "For he shall give his angels charge over thee, to keep thee in all thy ways. They shall bear thee up in *their* hands, lest thou dash thy foot against a stone."

Once in a while, when things do not please, somebody throws it up to me about the pretensions I make. My friends, if I have made pretensions I did not mean to; for in truth I am selfish, cross, and at times, I fear, crooked and hard to get along with. If there be any merit in being grievously sorry for these faults and failings, when I look back and see them, I do not know but that I have that merit. Sometimes it seems to me that I must give up in despair, were it not for the comforting promise, "The blood of Christ cleanseth from all sin."

BEES TO BE KILLED.

Is there anybody near friend P. who can take the poor bees and save them from death? Read:—

> I have 50 stands of bees that I expect to kill. They are in Diehl patent hives. If you want them you can have the comb and honey at 15c per lb., and pay me $2.00 for my hives. I will give you the bees. Write at once. G. N. Phares.
>
> Kempton, Ind., Sept. 24, 1881.

Friend P., if you would leave out those patent hives, and give us just the bees and combs, we would be better pleased; but even then the express charges would be a serious obstacle with us. Can not some of our readers near there save them? Bees will be "cash money" next spring.

PREMIUMS FOR EARLY SUBSCRIPTIONS.

Everybody who sends $1.00 for Gleanings for the year 1882, during this present month, may have any article on the 15-cent counter as a premium for so doing, providing he comply with the following conditions: You are to state the dollar was sent in accordance with this notice, tell what article you want, and the amount of postage. Those who have remitted before this reaches them, for 1882, can have the premium by calling our attention to it, and sending the postage. The 15 cents can be used for articles on any other counter, if you choose; but if wanted by mail, be sure to send the postage. In November, the premium will be from the 10-cent counter, and in December, from the 5-cent counter.

It were no more than just, to let our friends in Canada know they are indebted to Mr. Geo. O. Goodhue, Danville, Quebec, Canada, that we are enabled to use all Canada money and postage-stamps, at par. He has simply, for the sake of serving his countrymen, been doing quite a little banking business with us for over a year past, making no charge for his services. I presume he will scold at my making this mention, but I do not wish to receive credit for what belongs to another. If Queen Victoria's subjects are all like our bee friends in Canada, I could, with a whole heart, say with them, "God save the Queen!"

THE MICHIGAN SUFFERERS.

I presume most of you have, before this time, done something for these friends. In our town, we have sent several large boxes of clothing, etc., and also some money. A few of our bee-folks are among the sufferers, and one letter is at hand, telling of a little boy who burned. May God help the parents in this great affliction, and may he show us how best to manifest our sympathy. It seems these fierce fires are not alone confined to Michigan. See the following:—

> A terrible prairie fire swept away my apiary Sept. 6th. Chaff hives burned lively. The apparent resources are cut off, but the unseen are still abundant. God is safe to trust in. "Although the fig-tree shall not blossom, neither shall fruit be on the vines; the labor of the olive shall fail, and the fields shall yield no meat; the flock shall be cut off from the fold, and there shall be no herd in the stalls; yet I will rejoice in the Lord."
>
> Baxter Springs, Kan., Sept. 23, 1881. C. D. Wright.

I hope, friend W., it was not a great many chaff hives that were burned, and that you have not lost all your bees. Truly, the unseen resources of the great Giver are never cut off.

Friends, when you order honey-labels, please write out exactly what you want, or send us a sample label of what you had fixed in your mind. We will send you package of samples free of charge to select from. If you do not take the trouble to do this, but say simply, "Send me some honey-labels," you will have to take whatever the printers see fit to give you. One friend, in complaining, says he should think we might have known he didn't want labels for extracted honey, and I presume we should, had we recollected all his correspondence. At the very low prices we furnish them, the best I can do is to hand your letters to the printers; and if you do not tell them just what you want, I do not know how I can take them back. We are your servants, and are, also, really anxious to please; but I do not see how we can, unless you give full and plain orders. Cut out the size you wish, then write out with a pen every word and figure you want on it, and I assure you we can please, in quality of work as well as promptness.

THE OHIO STATE FAIR.

As our Ohio people saw fit to appoint me one of the judges on honey and apiarian supplies at the State Fair, I thought best to attend. I am happy to say that the exhibits were very fair, and I enjoyed very much the duties assigned me, more especially as my co-worker was the Rev. Mr. Ballantine, who gives us the excellent letter in Our Homes for this month. The third one on the committee being absent, we picked up a bee-man to assist. The pleasant part of the whole of it was, that all parties, so far as we knew, were perfectly satisfied and pleased with the awards. I met and made many new friends at our capital, and came away feeling happy, because I had known and seen more of Ohio and our

Ohio people in two or three days, than ever before in my life. Almost the only sad thing I saw at the fair was the long row of beer-barrels, with Ohio boys standing behind them, ready to serve anybody who had the requisite nickel. Is it possible this state of affairs is to remain thus in our beautiful State of Ohio? To make the said barrels more attractive on a hot day, huge blocks of ice surmounted them. Plenty of iced drinking water was found on all parts of the fair grounds, and every thing conducive to the comfort of the 75,000 whom I am told were in attendance. I do not know what the custom may be throughout our land, but I thank God that no beer is sold openly on the grounds of the Medina County Fair.

WHAT A POUND OF BEES WILL DO IN A SEASON.

WHEN in Michigan, I made a note of what friend Hunt had done with two packages of black bees, each containing a pound, and a black queen. I lost the memoranda, but if I recollect aright, each built up a good colony, and gave a swarm; and when I was there the whole four were storing honey in surplus boxes. Perhaps he gave each a couple of frames of brood, but I am not certain. I think he purchased them in May. It seems a little strange that a pound of bees and queen should amount to more than a whole swarm ordinarily does, but many reports seem to indicate that they have done so during the past season. I can think of no other explanation, than that the owner took more care and pains with them, just because a pound of bees in a wire cage was a sort of new thing, and a curiosity, as it were. You know it has been said that Italians produced the great results they have, just because they were a new thing, and received extra care and attention. Friend Hunt's success with the "black lbs.," would seem to encourage this idea. I presume many of you remember the great things that used to be done with a single strawberry plant of some wonderful new kind.

MORAL:—Just take the bees and plants you have already, and make believe they are some new, wonderful kind; and if your faith (and energy) are sufficient, you will find *they really are.*

SQUARE MEN.

MY friends, I am not only willing, but glad, to serve you in any way in my power, even to advancing money for you in a contingency, providing I know you are square and true, to the extent, if you should die, or meet with any other misfortune, your wife, mother, grandmother, or any or all of your relations, would have respect enough for your bright name to see that every thing was straightened up, "square" and true, right on the spot. There are such men among you, and, I repeat, it is a pleasure to me to advance money to them, on a few days, of course, or recommend them to others, or to give them assistance in any way. Well, other folks are wanting to know who these square men are, and sometimes the square men ask me if I will please say to somebody that I know them, and know they *are* square. Well, now, I have been thinking what a nice thing it would be to have a list of the straight ones, and also a list of the crooked ones. Let it include, say, every one among our bee-men who advertises any thing for sale at all. It is not to tell how much a man is worth, alone, but what his habits are; for we have those in the A B C class, and in their teens, who are more prompt and true than some who are worth their thousands.

TAKING BEES THAT ARE TO BE BRIMSTONED, TO FEED UP FOR WINTER.

MANY are asking if they can take bees that are offered as a gift, or at a low price, and build them up now by feeding. Yes, sir, you can do it every time, but you must be about it at once. If this journal reaches you after dark, and you have colonies that are weak in bees, out of stores, and out of brood, give them a feed of something before you go to bed, and then have them taking feed continually, for the next month. It is of the utmost importance that you improve every hour of warm weather. You all know by experience what it is to try to feed during such weather as we had last April. While it is warm with warm nights, feed will do wonders; but you want to have it all over, before it gets to freezing. Feed until the combs are full and bulging, and little bits of wax are stuck on top of the frames, and all over the hive. After you get the queen to laying well, do not take out the frames any more until next May. But let them build it all up solid just as they have a mind to. Feed granulated sugar, if you can; if not, coffee A. Cheap yellow sugar will sometimes answer, but it is very much more apt to cause dysentery. It will perhaps take 25 lbs. of sugar to feed up a colony thus, having no stores, but it is cheaper to give them the whole 25 lbs. and have them come through strong, than to stop at 15 and lose bees and sugar too. You want to feed until you get them "*booming.*"

SEPARATORS, OR NO SEPARATORS.

OUR neighbor Shane has had the most of his comb honey made in the combined shipping and honey crate (shown in our price list), without separators. The crate is taken right from the hive, and carried to market, without any repacking. The saving of labor by so doing is of course immense; and as his honey is straight enough to bring 24c per lb., wholesale, it certainly can not be very bad. I believe all hands admit, too, that we get quite a little more honey, when the bees can fill the whole case with solid honey, just as they naturally do, without any separators of any kind in the way. The great drawback is, that you must leave the case on the hive until every section is sealed; or at least it is a great deal more trouble to select the first-capped sections, and get them into a case, without having one section mash into its neighbor. It seems much a question of the time the bee-keeper has to devote to the matter. Another thing: you must use separators, if you expect to glass each section. If I am correct, sections glassed are in some disrepute just now, because the public object to paying for glass at the same price of honey. We have sold a great quantity of these cases, to be used without separators, this season, and I would be glad to have reports from them. We have bought tons of tin for separators. Shall bee-keepers keep on buying them? I once said I did not want any more section honey built without separators; but it was before we got up the case mentioned above. How is it, friends? Let us hear your different experiences. I believe friend Heddon has discarded separators.

◆

WE have to-day, Sept. 28th, 4419 subscribers. Our list seems to "stick" this year, when we get above the fourth thousand.

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This Case Weighs .....lbs.....oz
Contents Weigh ———lbs.—oz
Total, ...*lbs*.....*oz*

Take Notice!

This honey will candy, or become white and hard, as soon as it becomes cool, or cold weather begins, and this candying is, in fact, the best proof of its purity. To restore it to the liquid form, set it in a warm oven, or on the reservoir of the stove, removing the stopper so it will not ooze out. When it is all melted, remove and cork again. If sealed up while quite hot, with a cork dipped in melted wax, it will usually not candy again. Some liquify jt by placing the bottles in hot water. To prevent breaking the glass, let the bottles rest on a thin strip of wood.

Either of the above labels, printed on gummed paper, will be furnished at 10c per 100, or $1.00 per 1000. If sent by mail, 2c per 100 extra.

A. I. ROOT, Medina, Ohio.

FREE! A sample copy of the NEW ENGLAND BEE JOURNAL. H. POOLE, Mechanic Falls, Me.

Bee-Keepers' Student Wanted.

Bee-keeper must be experienced, and thoroughly reliable. No person using tobacco or cigars need apply. Address S. NUGENT, "Linden Apiary,"
11d Strathroy, Ontario, Canada.

FOR SALE.

A Barnes Foot-Power circular and scroll-sawing machine, all in complete running order. Price, $26.
11 H. L. RICHMOND, St. Johns, Olivet Co., Mich.

WONDERFUL AMERICAN EYE OINTMENT.

R. A. LABAR, ALLENTOWN, LEHIGH CO., PA.
Sample by mail, 10 cents. 11d

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Newark, Wirt Co., W. Va. 2-1
*A. I. Root, Medina, Ohio.
*H. H. Brown, Light Street, Columbia Co., Pa. 7tf
*E. M. Hayhurst, Kansas City, Mo. 1-12
*Paul L. Viallon, Bayou Goula, La. 7tfd
*D. A. McCord, Oxford, Butler Co., O. 1-12
*S. F. Newman, Norwalk, Huron Co., O. 7tfd
*Wm. Ballantine, Sago, Musk. Co., O. 7tfd
*C. B. Curtis, Selma, Dallas Co., Ala. 6-11
*T. W. Dougherty, Mt. Vernon, Posey Co., Ind. 7-12
C. H. Deane, Sr., Mortonsville, Woodford Co., Ky. 8tfd

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.
P. L. Viallon, Bayou Goula, Iberville Par., La. 1tfd
S. F. Newman, Norwalk, Huron Co., O. 1tfd
J. F. Hart, Union Point, Greene Co., Ga. 4-3

KIND WORDS FROM OUR CUSTOMERS.

QUEENS TO CALIFORNIA.

The four queens came to hand in nice order.
Ventura, Cal., Aug. 26, '81. R. WILKIN.

I am well pleased with my Clark's cold-blast smoker; would not give it for four of the kind I formerly had, although costing considerable less.

FAY KENNELL.
South Gates, Monroe Co., N. Y., Sept. 22, 1881.

The dozen glass-cutters are "boss." I cut all my glass with one, and it cut the last one as well as the first. I don't think I need a diamond now. The labels are nice. D. G. WEBSTER.
Blaine, Ill., Sept. 26, 1881.

I have just finished the 10 hives and find every piece all right. The 244 lb. scales are just the thing, could not do without them. all that have seen them are surprised at the low price. Freight on the hive and scales, $3.37, which I think reasonable.

CLAUDE SMITH.
Norwich, Chenango Co., N. Y., Oct. 19, 1881.

Honey-pails came all right. I am well pleased with them. Thanks for promptness. A. A. PARSONS.
Avon, Ind., Sept. 24, 1881.

I have received the A B C book of you, which I sent for. I am surprised at the beautiful way they are bound, and don't see how you can do it so cheaply. Please accept my thanks. J. E. TODD.
Unadilla, N. Y., Sept. 24, 1881.

Inclosed find $10.00, for which please send 3 more of those Waterbury watches. The one I ordered the 20th came to hand the 23d. I can't see how they can be sold for that money, if they are all as good as the one I got. J. C. HOSSLER.
Moultrie, Columbiana Co., O., Sept. 27, 1881.

You are very kind to offer to pay damage on smoker, but the expense of repairs was small; besides, I think your customers can afford to stand damages once in awhile, as you sell your goods so low. CLARENDON BUTMAN.
Plymouth, Penobscot Co., Me., Sept. 3, 1881.

The watch is a wonderful piece of mechanical skill. The whole of its internal arrangement turns with the minute-hand, and if it continues to work as it now does, it will be one of the most remarkable productions of this remarkable age.
Wellsville, Mo., Oct. 10, 1881. J. T. STEMMONS.

KNIVES BETTER THAN CIRCUSES.

I am a 14-year-old boy, and I want a knife. I bought one from you last winter, and I lost it, and I want another. My pa gave me 50c to go to the circus to-day, so I changed my mind, and send you the 50c for a knife. H. E. BOWEN.
Custer, DeKalb Co., Ind., Sept. 7, 1881.

The queen I ordered from you about the 10th of this month I received in less than three days from the time I sent for it, which was much sooner than I expected it. I introduced her according to directions, and she was received in good shape, and is doing finely. The hive is well filled with brood to-day, Aug. 29th. J. Q. A. WALKER.
Union City, Erie Co., Pa., Aug. 29, 1881.

The bill of goods was received O. K. a few days ago, for which please accept thanks. The lace scissors, little plane, and, in fact, every article is all that one could wish, and much better than any thing we can get of the kind for the same money in this "Sunny South land." *Bees are working gloriously.*
ALLAN D. LAUGHLIN.
Courtland, Ala., May 24, 1881.

We like the scales, "The Favorite," ever so much. The selected tested queen received of you last May I put with two frames of hatching brood; filled up the hive with empty comb as needed. They swarmed twice, besides giving some surplus honey. I also took out several frames of eggs for queen-raising. Looking for her a week ago I found her not, but a young queen instead. From 20 hives I will take 700 lbs. extracted, and 100 lbs. comb honey.
MRS. CHAS. FAVILLE.
South Wales, N. Y., Sept. 19, 1881.

The carpenter's pencil came to hand last night; and all the other goods ordered, including matching-planes and grate for smoker, have been received. All are very satisfactory, and in good order, except lamp-shade, which was crushed and broken in the mail. But never mind. I sent for it more from curiosity than necessity, and hardly expected to get it safely through. Here they charge $3.00 for the same kind of matching-planes which cost me only $1.65, even when registered. WM. MUTH-RASMUSSEN.
Independence, Inyo Co., Cal., May 21, 1881.

THE HUNTER SIFTER; ONE OBJECTION FOUND TO IT AT LAST.

I received the crank sieve, but I am sorry to say it is not what I want. I wanted a sieve to sift medicine. This will not answer, and I should not like it to sift flour. The object in sifting flour is to get out the worms; but this thing will grind the worms, and the biscuits would be equal to Liebig's extract of meat. I have tried to sell the thing, but it is no go. I will return it. V. LEONARD.
Springfield, Bradford Co., Pa., Sept. 5, 1881.

PAPETERIES.

Where on earth did you scare up that atrocity which you have christened "Papeteries"? (See Catalogue, p. 32.) Had you not better sharply mark the little chap, say with the policeman's star, lest his own mother should not know him? Jokingly,
Koshkonong, Wis., Oct. 17, 1881. D. P. LANE.

[*I* didn't christen it at all, friend L.; it is the name the paper and envelope manufacturers give to a little box of stationery. I do not know whether the pretty pictures on the lid of the box have any thing to do with the queer name or not; but some way they seem to please, especially the small ones for the juveniles.]

You see, friend Root, my showing your double-ender files has sold some more for you, and handles to boot. The other goods came in very nice order. One of the smokers I sold the next day after I received it, to a brother bee-keeper. I have sold another one to-day, and my old Simplicity. The scales and feeders are for myself. I had a pair of the Little Detective scales, and I sold them; I want a pair that I can weigh hives on, and in fact every thing, even to "the wife," if I wish. R. P. LOVEJOY.
Greig, Lewis Co., N. Y., Sept. 26, 1881.

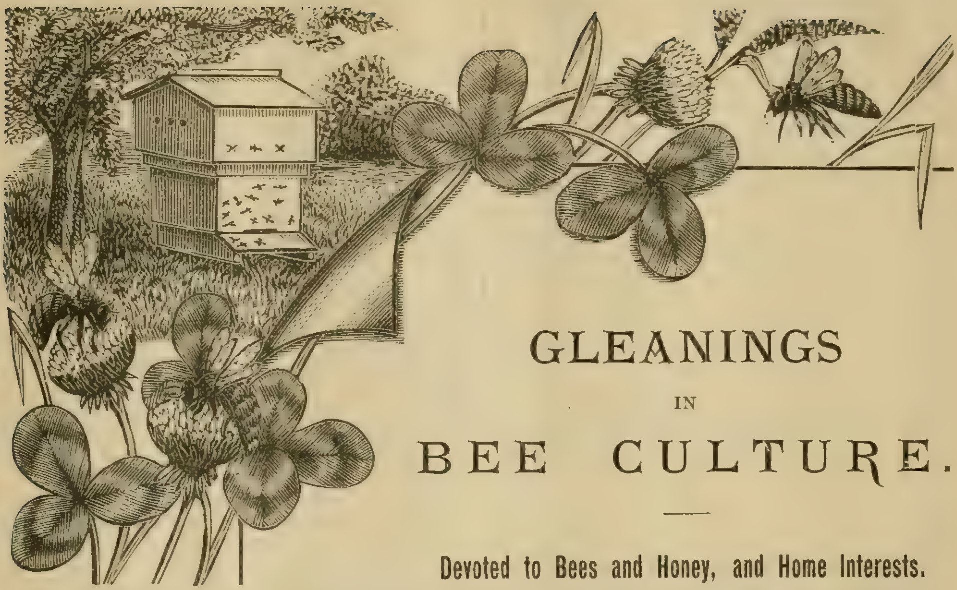
[Thanks, friend L. There will be no trouble at all in weighing the "wives" as well as bees, on our large scales, if they don't weigh over 244 lbs., and it seems to me any woman might be satisfied with that limit.]

I don't know what is the matter, but the goods we have got of you have given satisfaction in every respect. We have filled every order for queens, and have given satisfaction so far as we have any knowledge. If there are any of our customers that are not satisfied, we will try to satisfy them if they will let us hear from them. Mr. Johnson and I have increased our bees to 65 stands from 35, some of them very weak. T. S. HALL.
Kirby's Creek, Ala., Oct. 6, 1881.

[It may be urged by some, that the above looks a little like free advertising; so it is, friends, and I shall be most happy to do the same sort of free advertising for every one of you. I can with a clear conscience do almost any thing for those who give satisfaction to their patrons; but you do not know how it pains me to hear advertisers say unkind things of those who have been so kind as to send them their money and their custom. How is it, friends? As the season closes, can you say, with a clear conscience, that every one with whom you have had deal, is satisfied, so far as you know?]

KIND WORDS FROM A COAL-MINER'S BOY.

What in the world did you send me your GLEANINGS for 3 months for? That 25c was for postage on the smoker you were fool enough to give me for not using tobacco, and I shall not use it, if I know it, any more. Now, I intend you to have your pay as soon I get the money, because you have enough to pay out for nothing. I think that some try to take the advantage of you. Friend Root, I feel as if you were a very near friend of mine, and can't help it. I would like to write you a long letter (I have so much to say), but I can't, because my learning is poor. I never went to school since I was 8 years old. I am a coal-miner's boy who never drank whisky, and now I have a little farm, and a good locality for bees, out of my hard earnings. I never took an oath in my life; never was before judge or jury in any manner, and will try not to be. I would like to have some of your profanity cards to give the boys in our shop. I am working in C. M. Crandall's toy shop, as engineer, until I finish paying my debts, and then I will try bee-keeping and queen-rearing. When I was 12 years old my father got killed two feet from my side, in the mine. I was a door boy at the time; father was the mine boss. My eldest brother was near at the time. It was in 1862. Brother went to the war, and left mother and me and four little ones, so that is the reason I never could go to school, and I have often sat down and cried when I have seen other boys going to school, and I had to go in mines to dig coal. When I was 17 I was a miner, and at that age I have handled 19 tons of coal in one day, with the pick and shovel. What would a boy think to-day to see a boy going in the mine with his lamp and book? Ah, Mr. Root, I learned to read in the mine. This is from one who loves to do right.
ROBERT J. THOMAS.
Montrose, Pa., Sept. 6, 1881.



GLEANINGS
IN
BEE CULTURE.

Devoted to Bees and Honey, and Home Interests.

Vol. IX. **NOV. 1, 1881.** **No. 11.**

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.
Established in 1873.

TERMS: $1.00 PER ANNUM, IN ADVANCE; 2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POST-OFFICE. Clubs to different postoffices, NOT LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

NO. 24.

APIS AMERICANA.

THE following letter was received from friend P. L. Viallon, and, thinking it "too good to keep" all to myself, I take this method of replying:—

FRIEND HUTCHINSON:—As you are a queen-breeder, like myself, and knowing that you are of that class that will tell the truth in spite of all, I thought I would ask your opinion of the Apis Americana, or, rather, the American improved Italian bees. I would say your experience, but I am not aware of your experimenting in this line. I use the word opinion, as you have been sending queens to many, and you certainly must have received reports from the majority, so as to be able to compare your queens with the improved queens reared under the swarming impulse, etc. Now, for my part, I have experimented upon this subject for several years, and I have come to the conclusion that it is an easy matter to degenerate bees, and that there is no improvement to be made on the daughters of selected imported mothers. Since 1876 I have been importing queens from Italy. I have never imported more than two years from the same district, and although I have paid extra to have queens selected, I must say that at least one-half of the imported queens are not worth breeding from, hence the outcry against imported queens. But when one selects the best queens from the better half, to breed from, then from these queens he can rear queens that are as good, if not better, than the great Apis Americana. Now, I do not say this because I am prejudiced, but give it as the conclusion that I have arrived at, after actual and laborious experiments. You know very well that it is cheaper and less trouble to breed from home-bred mothers; but as I have found my bees to be a little less energetic after two or three generations, I have determined to breed only from imported mothers of my own importation, as then I can select what I want.

I do not rear queens by any improved process or principle, but have the cells built in moderately strong colonies, and hatch them in nuclei. Sometimes, when there is a press of business, and for want of stronger colonies, I have had some cells built in very weak colonies, and, though the cells are few, I have had just as fair and as good queens; which has often made me think that many of the theories advanced are—well, only theories.

Now another case: In examining a colony last spring, I found it to have a queen as small as a worker, probably a little longer, but smaller in diameter. I expected to replace her in a few days, but, not having any queens to spare, I left her, as she was laying well, until the latter part of June, when, in going to replace her, I found that she had been superseded, and that her daughter was as fair and large a queen as any I have had, and she has turned out just as prolific as any queen can be. Now the question is, Is it safe to breed from this queen! I think not, though she is what any one would call a selected queen. But then, I believe a little in Darwin.

Now about those rearing queens and claiming that they are mated with selected drones. I know that we can have colonies with selected queens rear a great many drones, and the probabilities are that many of the queens will mate with these choice drones; but how can a man prevent his other colonies from rearing drones? and if he has a neighbor apiarist, how can he control the production of drones in his apiary? If every colony in the yard has been deprived of every particle of drone comb, it is astonishing to see the number of drones that will be reared. Unless a man has only a few colonies, and is isolated for several miles from other bees, and then gives a thorough examination when required, how can this selection of drones be accomplished?

Well, friend H., I hope you will excuse me for having written so much about these things, but they were on my mind, and I felt like speaking about them to some one, but do not feel like giving them to the bee journals, as I have neither time nor inclination to enter into a public discussion. Trusting that you are satisfied with this season's result, I am,

Bayou Goula, La., Sept. 15, 1881. Yours Truly.
PAUL L. VIALLON.

Well, friend V., and all the rest of the friends, I have owned only three imported queens,—one from Dadant and two from Nellis. These were all good queens, and my apiary has been almost entirely stocked with their daughters. I have had no experience with queens removed many generations from imported stock. Some apiarists assert, that the so-called Albino bees are the result of continued breeding from light-colored home-bred stock. Who has the bees that are the furthest removed from imported stock, and yet are superior, or even equal, to the average imported stock? Many customers have written, praising my queens, but none have made any comparisons between them and queens reared under the swarming impulse. I have, this season, had quite a number of queens reared under the swarming impulse, and although the cells were larger and nicer-looking than many of those obtained by removing a queen from a colony, I have failed to detect any difference in the queens. Two or three customers have complained, saying that a queen was not prolific, or that she did not produce the right kind of bees, and other queens have been sent.

I *presume* that the queens reared in Italy are very much like the queens reared here; that is, some are good, and others bad or indifferent; and it would seem reasonable that, by selecting the best queens to breed from, and then selecting again from their daughters, and then choosing again from *their* daughters, and continuing this selection, that a superior strain of bees might be developed; but right here steps in that drone part of the problem, about which friend Viallon so graphically writes. Last spring I had half a dozen black and hybrid colonies on the yard. I kept them free from drones until I reared Italian queens to put in their places, and I can imagine what a task it would be to keep a large number of colonies free from drones. I have read of giving each colony a comb of drone brood, from choice stock, putting it at one side of the hive, away from the brood-nest, and then removing it after the drones had hatched. It was asserted that this would satisfy the desire for drones, and that, if no drone comb was afterward allowed in the hive, no more drones would be reared. I have never tried this plan, but have always kept my own and my neighbors' hives supplied with purely mated queens; in most instances, daughters of imported mothers. If fertilization in confinement could be made practicable, I should have more faith in *Apis Americana.* We now have several different races, or varieties, of bees in this country, each one of which seems to possess some desirable characteristics. Now, if all these valuable traits could be combined, the result would probably be *A. Am.* It seems to me that friend Jones, with his isolated islands, is doing as much, perhaps, as any one in developing *A. Am.*

I would not say a word to discourage any one who is trying to improve the Italians or any other variety of bees; on the contrary, I would do all in my power to encourage them; yet it is my *opinion*, that, for the present at least, we had better continue importing.

If I am correctly informed, Italy, Cyprus, and Palestine do not afford so grand honey resources as are found in our own beloved land, and the bees of those distant climes are obliged to labor very persistently in order to obtain a subsistence, only the "fittest" surviving. When they cross the Atlantic they bring with them that disposition to *labor*, even for a small reward; and it is only after living for a time in this land of plenty that they discover how easy it is to live and yet be a trifle lazy. Of course, this is an old and oft-repeated theory, which may or may not be true; but it is well known that the removal of fruits, vegetables, plants, grains, animals, etc., to some distant and more favorable locality is usually followed by excellent results *for the first few generations;* and why should not this rule hold good in regard to bees? I do not wish to be understood, however, as having *no* faith in *A. Am.*, because we Americans are such a restless, progressive, go-ahead people (made up from different races, as will probably be the case with *A. Am.*), a people that are satisfied with only the best, that the time when *A. Am.* will be placed in a higher rank than all other bees, and be in a great demand the world over, may not be so far distant as some of us imagine.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

DOOLITTLE'S REPORT FOR 1881.

WINTER seemed loth to give place to spring, so it was April 20th before our bees could fly to any amount, at which time I found the long, severe, cold winter had made sad havoc with my pets, and that I had only 30 colonies left out of my 112, which were in good condition Dec. 1st, 1880. These 30 were obtained by uniting, till I thought they were strong enough to be of use to me; and had I united to 25, probably better results could have been obtained. May 1st, elm and soft maple invited the bees to their opening buds to obtain pollen, while on the 12th, golden willow gave them their first taste of new honey. There seems to be something in this first honey that sets the bees "booming" as to brood-rearing, as nothing else does during the whole year; and often a surplus of 10 lbs. of honey is obtained from the few trees we have along a small stream near us. On May 21st, apple-blossoms opened, and our bees were given a fine treat for several days, securing a nice store of apple honey to keep them until white clover bloomed. Owing to the extreme heat during May, white clover commenced to bloom June 1st, about fifteen days earlier than usual. On the night of June 6th we had a hard frost, followed by cold, cloudy, rainy weather, which lasted till the 29th, keeping our bees from the fields, so white and enticing to them, much to the annoyance of their owner, if not to themselves. At this time the bloom was nearly past; but as good weather now favored us, some little was gleaned by the industrious bees. July 8th, basswood opened, and we expected to see a rush made for the honey that always seems to set the bees crazy, as it were. But our hopes were again disappointed, for the honey-flow from this source was very meager indeed; in fact, it was the poorest basswood season I ever knew, and at its close our hopes were blasted, as scarcely a box of surplus honey had been taken. However, our bees were in the best possible condition to secure all there was, so we had no ground to blame ourselves for not doing well our part. Along during the latter part of basswood, we had noticed that the large kind of red clover was blossoming, so that the fields were getting red, which was a treat to our eyes, as a worm in the head had kept the red clover from blossoming for the past few years. As the fields grew redder, our spirits rose, and hope revived; for in 1872 our bees gave us as high as 60 lbs. of box honey from some hives from red clover alone. Soon the bees began to "go" for the clover, and, to our astonishment, the few acres of teasel within the range of our bees' flight was yielding honey wonderfully. The bees now "rolled" in honey at a rapid rate for about 10 days, and then "slowed up," so that August 1st found the season for 1881 over with us, as the 100 or more acres of buckwheat within the range of our bees' flight yielded no surplus. Four years have now passed since we have had a pound of surplus honey from buckwheat. As the result of our season's work, we have taken in comb honey, 3317 lbs., and 718 of extracted, giving a total of 4035 from our 30 colonies, which gives an average of 134½ lbs. to the colony, and brings our average for the past 9 years up to 92 lbs. per colony. We have increased the 30 colonies to 80, which are in good condition for winter. We have also reared and sent out 83 tested queens, which of course lessened our honey report to a certain extent. When spring opened we had but one good strong colony, and concluded to work that for extracted honey. We will give the readers the result from this one, so they can see the source from which our honey came, and the yield:—

Willow, 5½ lbs.; apple, 19¼; white clover, 58¼; basswood, 97; teasel and red clover, 232 lbs. Total, 412 lbs. We also worked a small apiary of 15 stocks a mile or so from home, and obtained from them 874 lbs. of box honey and 1400 of extracted, giving 2274 lbs. in all, or 151½ lbs. average to the colony.

One thing we noticed with pleasure, which was, that our colonies gave nearly an equal yield per hive. This is what I have been breeding for for the past few years, hoping to obtain like results from all, and not have one stock in the yard give a large yield, and another nothing. When we, as apiarists of America, can bring our bees up to such a standard of excellence that all colonies will produce an equal amount of honey, and said amount be as large as that produced by our very best colony of a few years ago, we shall have no further need of importing stock, for *Apis Americana* will be the best bee in the world. G. M. DOOLITTLE.

Borodino, N. Y., Oct. 17, 1881.

GETTING A LAYING QUEEN FROM EACH NUCLEUS ONCE IN 10 DAYS, AND INCREASING 1 LB. OF BEES TO 5 COLONIES IN ONE SEASON.

CAN ALL OF THE A B C CLASS DO IT EVERY TIME?

THE friends will please imagine that we are sitting on the blue grass, under the elm-tree, near our apiary. As the young bees are gaily sporting in the warm October sunshine, and the workers are busily carrying in the pollen and a little honey from smartweed and goldenrod, we will, as pleasantly, examine October GLEANINGS. As our time is short, we will notice only two items.

First, here is friend Hutchinson, who has something to say about certain very cheap nucleus hives, in which he finds a laying queen once in about ten days. Now look here, friend H.; if that is the way you do, I have got to scratch around and see what is the matter, for I can not begin to do it in our yard. How do you manage it? Don't your bees ever kill any virgin queens, or tear down the queen-cells "ready to hatch" that you sometimes give them? Do your queens never get lost in mating? and do they always begin to lay before the tenth day, so as to have time to leave a few eggs to keep up the strength of the colony?

I used to think that I could successfully introduce newly hatched queens to small nucleus hives, almost every time, and at the same time that I removed their laying queen; but I did not do it this past summer, and I had to (or thought I did) adopt the rule of leaving them queenless three or four days before offering a stranger; and even then I would occasionally lose a queen.

Neighbor H. makes an experiment which is eminently successful. He takes a pound of bees in May, gives them a few empty combs, and, by and by, some pans of sugar syrup. By the last of September they have increased to 5 fair colonies in good order for winter.

Some of the enthusiastic A B C class who, by the way, need to be curbed in a little, want to know if those bees increased to so great an extent with the help only of the few combs first given, and the pans of syrup fed indiscriminately, or were they guided and helped all through the long dry hot summer by the active brain and skillful hand of a thorough bee-master who fed them just right, gave them complete combs when needed, also queens from another apiary? In other words, may these inexperienced friends expect to do half or even one-fourth as well?

Please stand up, Neighbor H., and tell us all about it. You see, you and I hope to sell these A B C friends a great many pounds of bees next summer, and we do not want them to lose money; neither do we want our bees to suffer by the mistakes of our customers. Hence I think it would be a good plan for you to tell them just what to do with their bees. Do it now, that they may have plenty of time to study the matter thoroughly. E. M. HAYHURST.

Kansas City, Mo., Oct., 1881.

May I not speak a little first, friend Hayhurst? Perhaps I should explain to our readers, that I put the head and sub-head on this article, and I also wrote about what Neighbor H. had done with a single pound of bees. Well, I would say, for friend Hutchinson, that I think he did not intend to say he could get a queen in ten days on the average, but that it happened he did once or twice with those little hives. I know pretty well that both he and Neighbor H. have their share of bad luck. Now about Neighbor H.'s pound of bees. He said he was going to increase them to five colonies, and I bantered him so much about it that it stirred him up to an unusual degree of determination. They are not wintered yet, and if you had not written *your* piece, I am afraid they never would have been, all of them. If you want to know whether it does Neighbor H. good to stir him up now and then or not, just ask his wife. Now he may answer the rest.

NEIGHBOR H.'S STORY ABOUT "THAT POUND OF BEES."

As friend Hayhurst requests me to stand up and tell all about that pound of bees, I will arise. On the 15th of May I put up a pound of bees to ship. The weather was very warm; white-clover honey was coming in very fast; they got daubed with honey, and when I got to the factory they were all in the bottom of the cage nearly suffocated. I put them in a chaff hive on empty combs in Mr. Root's apiary. They were Italian bees, but I put a tested Holy-Land queen with them, more for the purpose of showing the bees to visitors than any thing else. I also gave them two frames of new honey, mostly unsealed. I covered them with the winter chaff cushion, and then left them severely alone for about a month, when I divided them first.* And here is where the trick commences. There were 7 frames of brood. I took all the hatching and sealed brood and the queen for the new swarm, leaving the eggs and larvæ to rear queen-cells from. When I rear queen-cells I always like to feed the colony. I have fed $11.00 worth of sugar and $3.00 worth of honey. I have raised from that queen over 100 queen-cells and two laying queens, and have given the five two laying queens from the other apiary.

Medina, O., Oct. 26, 1881. NEIGHBOR H.

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*Mr. Root asked me how many swarms I could make, and I said five; he laughed, but I have the five.

PATENT-RIGHT BEE-HIVES.

KIND WORDS FROM GOOD FRIENDS.

I CAN'T get along without GLEANINGS, for I like it very much, and I like the editor too; but it hurts to read such sentences as, "Have nothing to do with any man who goes around selling rights for patent bee-hives, or any thing else" (p. 498), for I can say that I'll never engage in a business that I can't ask the Lord to help me in. I have not taken a cent from a man this season but that has declared himself perfectly willing to pay, and some of my warmest friends are those I have done work for. Honest, now! don't you believe this is a kind of hobby of yours? It surely can't be so sinful to get an article patented, or our government would not allow it. Isn't this more a matter of opinion, and shouldn't we cultivate a charity for each other's differences? Why, I believe there comes pretty near being two sides to the temperance question, and yet I earnestly advocate the right, and never drank a drop. But you couldn't scare *me* off of your subscription list any how, for GLEANINGS contains too much good reading, and if I ever come anywhere near Medina, I'm coming the rest of the way and call on you. Yes, I almost believe I would, even if I knew you would turn up your nose, and say to yourself, "Yes, here is one of those patent-hive men." G. K. HUBBARD.

LaGrange, Ind., Oct. 16, 1881.

Now, Mr. Root, on page 498, October GLEANINGS, you cut the "Kidder" family. Do you know them *personally?* did they ever harm *you*, or has your imagination, and letters of hasty writing from others, made out the whole family of "bad repute"? If a relation of yours should "miss it" in some of his dealings, how would it "strike" you should it be said, "The whole Root family are in bad repute"? I believe the Maker of man has room in the field of charity for what is *good* in the "Kidder family." I don't believe in total depravity, you see; and in the same article you say, "Have nothing to do with any man who travels about selling rights for patent bee-hives, *or any thing else*," etc. When you consider that, I think you will pass judgment on yourself. I am not in favor of flooding the country with "patent rights," but I believe it just for a person to protect himself from unprincipled parties, by having a thing patented that is meritorious, and where the public is not overcharged by the "right."

A little argument will not build a wall between us, for I won't be any thing else but your friend, and I do not mean to be presumptuous. I believe, if we would obey the great injunction, "Come, let us reason together," the two great powers of heaven and earth (love and charity) would find lodgment in more human hearts. We are too touchy.

W. M. YOUNG.

Nevada, Wyandot Co., O., Oct., 1881.

I must confess, my friends, the spirit of kindness and true friendship shown in both your letters has touched me very much; so much so, indeed, that I have just had the Humbug and Swindle department lifted out bodily from the pages, although it contained two complaints against patent-hive venders. If I have been erring on the side of too much severity, I will try for a little while to err on the side of being too lenient. I am not at all shaken in my position, that the greatest good to the greatest number would be secured by just such advice as I gave, but because of just one such man as yourself, friend H., among the number who are traveling about selling rights for a patent bee-hive, (do *you* go among utter strangers, friend H.?) I will, for the present, refrain. Friend Y., that one expression, "I won't be any thing but your friend," has taken a strong hold of me. If we could all hold that spirit in all our arguments and disagreements, what a different world this would be! Methinks I see one weak place in your plea. You ask if any of the Kidders have ever harmed *me*. To be sure, they have not. If they had, it would have been a personal matter, and entirely out of place in my own journal. Bad men are published, to save our readers from being defrauded by them; and I do not know how I can very well be excused from holding up this warning, when the Kidders have been practicing a species of blackmailing for nearly twenty years past. When I say Kidder family, of course I mean those of them known in bee culture.

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BEES AND GRAPES.

ALSO A LITTLE ABOUT BIRDS AND GRAPES.

AS there has been a great deal said about bees eating and puncturing grapes, I take this opportunity to send you by mail *one* of the bees or birds that do puncture the grapes, making a hole as small as can be made with a fine needle, and larger. I have had about 16 years' experience with bees and grapes; have never seen a bee puncture a grape yet. I know by watching what mischief (to my sorrow) this little bird is among the grapes.

If you know the name of the bird, please let me know. C. F. HOPKINS.

Brownhelm, Lorain Co., O., Oct. 11, 1881.

Not being posted in ornithology, we sent the bird to Prof. Cook. Here is his reply:

Dear Sir:—The bird from Mr. C. F. Hopkins, of Brownhelm, Ohio, and received through you, is the ruby-crowned Kinglet (*Regulus calendula*). It is sometimes called the ruby-crowned Wren. It is found from the Gulf, in winter, to Alaska, in summer; and from the Atlantic to the Pacific. It appears here in April and September, and the same is true, without doubt, in Northern Ohio. It nests and breeds north of us. This little bird is greenish olive in color, with a bright crimson spot on its crown. It has a sharp bill, which enables it to reach into crevices under bark, etc., for the insects which form the larger part of its food. The length from tip of bill to tip of tail is 4½ inches.

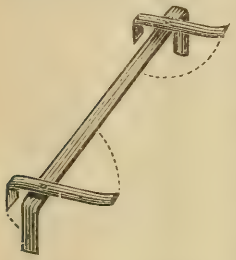
Mr. Hopkins's observation is new. This little beauty, whose song is as beautiful as that of the canary, has heretofore borne an untarnished character. True, Wilson says that it sometimes eats the stamens of apple-blossoms, but this could hardly be called harm. But that it should form this new habit of piercing grapes, and sipping the juice, is surely much against its character. Its bill is admirably fitted for just this work, from its needle-like shape; and granting that it should once experiment in the line of tapping grapes, we could hardly wonder that it should continue in that line, nor blame it for so doing, especially as it has more than earned the grape juice by ravaging among the insects.

This observation is of no little interest as an item in science. Every new fact like this is very valuable. A. J. COOK.

Ag. Col., Lansing, Mich., Oct. 17, 1881.

A NEW COMB-HOLDER.

IN taking out the first comb from a hive full, I presume almost every one has looked about wishfully for some place to hang or stand it, without hurting the bees that ought to be found covering every part of it. If stood on end with considerable care, you may not hurt bees; but if it tumbles down, or gets blown over by the wind, you may not only have bees killed, but the queen too, as has happened several times to my knowledge. You will observe that we have a device, made of folded tins, shown in our price list, to hang on the edge of the hive, for this purpose. Well, a few days ago a visitor, Mr. H. W. Minns, of New London, Ohio, brought into the office a device for the same purpose, shown below.


MACHINE FOR HOLDING THE FIRST COMB.

It is made of strap iron, such as is used for ironing the upper edges of wagon-boxes, and, when well made, looks very neat. When it is to be shipped, or laid away on a shelf, the cross-irons can be turned on the rivets so that it is in a very compact form, and it occupies less space than when open, as in the cut. The expense is just the same as our tin ones; but as the iron is heavier, it will cost more to send them by mail.

POLLEN; ITS PRESENCE IN WINTER.

FRIEND PETERS' OPINION OF IT.

EDITOR GLEANINGS:—In your August number is an article headed "Come, let us Reason Together," from Mr. Heddon, seemingly intended to invite discussion, or, rather, to draw out the opinions of bee-keepers on the subject of the influence of bee-bread, or pollen, as a factor in the production of bee dysentery. It is not the purpose of this paper to criticise the settled convictions of one so practical in all his views on apiculture as friend Heddon has hitherto shown himself; but as he invites us to "reason together," I suppose his object is to call forth the opinions of other bee-keepers on that especial subject. For myself, I can not for a moment entertain the belief that pollen, *per se*, ever did produce bee dysentery. For all insect creation, nature has been lavish in yielding natural food for their support and development. Fields and forest abound in a profusion of pollen-bearing flowers whose secreting vessels pour out the fragrant pabulum of bee-life. The physiology of bee organism, from the earliest history to the present time, clearly indicates the peculiar fitness of such food; and there is not, never was, and perhaps never will be, any substitute that is so perfectly adapted to that end. So well established is the fact, that the food sought by instinct in nature's laboratory by all animal nature is essentially the very elementary principles of those creatures, that some physiologists have supposed that at some antecedent period the food, or ingesta, had a great influence in molding the characteristics of both insect and animal races. How, then, I ask, can bee dysentery be ascribed to the food so well suited to the growth and development of the young insect, and in part the food during the natural life of the older bees? Such a fact, if such it could possibly be, would subvert nature's laws of aliment and assimilation. I am ready to admit, there are many circumstances connected with bee-cellars and bee-houses in the State of Michigan, which we of this latitude can not fully appreciate; but if friend Heddon's views are correct, the whole multitude of nursing bees in existence must learn anew how to select some food better adapted to the digestive organs of bees besides the time-honored bee-bread—the aliment of all former generations of bees. I do not believe bee-bread is as noxious as he supposes, from the fact that there is a greater variety of pollens gathered from the flora of the Mississippi River bottom than from any other place in America. The great earthquakes of 1811 produced an upheaval of all the region about New Madrid, Mo., and a corresponding sinking in Tennessee, on the east side, creating Red Foot Lake, and a corresponding depression on that side along the St. Francis River, extending over a large area of land; this last, the sunk lands, goes dry after the subsidence of the spring floods, when myriads of vines, weeds, shrubs, etc., spring up and fill the air with aroma many miles around, and affording the greatest locality in the world for bee-raising, on account of the great quantity and variety of pollen. Hunters take large amounts of wild honey for market, and yet the number of wild colonies is still on the increase. This strange convulsion, resulting in the production of sunken lands, and upheaval of the New Madrid country, has developed the finest country for bee-keeping known to this region of the State, and no one ever saw bee dysentery among either wild or domesticated bees in that section. In this bottom country, where the alluvial soil is most fertile, and flowers exuberate and are rich in honey and pollen, and where bee-rearing is so successful without any disease whatever, I am forced to discard the views of friend Heddon. All the world will agree that animal life is most thrifty, and the individual more perfectly developed, where natural food is most abundant. In all this vast variety of heterogeneous flowers, whose pollen is all thrown together in the arcana of the bee-hive, why has the bee dysentery never visited us? If bee-bread ever did produce the disease, this extensive mixing of many kinds of pollen should certainly develop it. I I have known bees in February without one drop of honey, but with a liberal supply of pollen, pull through for three weeks until the maple blossoms came to their relief. No dysentery then. For fifty years have I seen abundant stores of pollen in my colonies, on which the young bee was fed, and the old bee partly supported through winter, and up to this good day never have I seen a case of bee dysentery. From these considerations, I am induced to believe our friend is mistaken in his conclusions as to the causes of the disease, and do not hesitate to advance the opinion, that the real cause may be found in the long winters and *forced confinement* of bees, thereby preventing a frequent discharge of the fæcal contents of the intestines, which, being retained, must ferment, produce inflammation, dysentery, exhaustion, and death of the bees. "Come, let us reason together." GEO. B. PETERS.

Council Bend, Ark., Sept. 25, 1881.

SOMETHING TO PUT UNDER THE CUSHIONS.

THE PROBLEM SOLVED APPARENTLY.

I WENT into the saw-room the other day, and Mr. Gray was at work at some queer-looking thing with eight legs, that looked as if it might be guilty of killing sheep, or sucking eggs, if it got loose after dark.

"What in the world is that, Mr. Gray?"

"Why, it is something that Shane brought over. He wants us to make 189 like it—one for each of his hives. It was sent him by some great bee-man down near Cincinnati, who never loses his bees wintering."

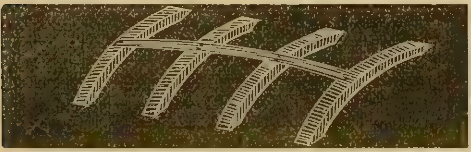
"Was it Muth?"

"No, that was not the name."

"Hill?"

"Yes, Hill; that is the man. He wrote Shane a letter and sent him this machine, which I think is to be put under the cushion, to make a chamber for the bees to cluster in, so they can readily pass over the frames from one to the other."

Here is a picture of the thing, my friends.



HILL'S DEVICE FOR COVERING THE FRAMES IN WINTER.

I saw Mr. Shane when he came after them, and he has promised me the letter from Mr. Hill, but it has not come yet. The sticks are sawed on a circle, from half-inch basswood. They are sawed on a curve that would make a circle of perhaps 15 inches in diameter. The stuff is held at an angle when sawed, so the outer surface is something like the surface of a sphere. The two inside sticks are 9 inches in length; the two outside ones, only 8. The back-bone, as it were, is a strip of very light hoop-iron, like that used to hoop pails. It is about a foot long, which holds the ribs about 4 inches apart. You set this on the frames, then lay over it a piece of bagging, or burlap, and fill the upper story with chaff.

It occurred to me, when I first saw it, that under this would be a splendid place to put sticks or bricks of candy, when candy has to be fed. Mr. Shane said he used four cobs, similarly placed last winter on all his stocks, but that he had never thought to mention it when I had interviewed him in regard to his great success in wintering. We shall use it over all of our colonies, and I have much faith that it will give the space above the bees, about which so much has been said in the reports of wintering with the sections left on. A quilt or cushion does not seem to answer as well as loose chaff, because it interposes too many thicknesses of cloth. Perhaps very porous cloth, like burlap, might be unobjectionable; and cushions are so much cleaner and handier than loose chaff.

If you can not well make these things, we can furnish them for 5 cts. each, or $4.00 per hundred in the flat. If wanted by mail, the postage will be about 4 cts. each.

The "Growlery."

This department is to be kept for the benefit of those who are dissatisfied; and when anything is amiss, I hope you will "talk right out." As a rule, we will omit names and addresses, to avoid being too personal.

FRIEND ROOT:—I took GLEANINGS a long time, but quit on account of glucose and dollar queens. I am glad you have dropped the glucose. When you drop dollar queens, which I think you will, I shall likely send for GLEANINGS. I am a poor writer, but your well-wisher. May God bless you. D. G. PARKER.

St. Joseph, Mo., Oct. 18, 1881.

I haven't had a suitable letter for the Growlery for some time, and I am not sure the above is one; in fact, the concluding injunction seems to indicate that friend P. is a good friend of mine, in spite of differences. I presume most of our readers will smile at the allusion to dollar queens now. Friend P., you are not fully up to the times, I fear. Our highest-priced queens are reared exactly as the dollar queens are; in fact, all are reared together. When tested, the best are three dollars, and the poorest are 50 cents. The dollar queens are simply those sold before they are tested at all. Most bee-keepers have their own peculiar notions in regard to queens, and, as a general thing, each prefers to test them himself. It saves time, to buy a lot of dollar queens and pick out one from among them that suits you. The great queen trade that now fills our mails a great part of the year is mostly in dollar queens; and if you will look over the reports in our back numbers, you will see that their colonies are giving the great yields of honey. The men who have sold hybrids and culls for dollar queens have killed their trade, and are now mostly out of the business.

In regard to "glucose," as you are still pleased to term it, here is an editorial from the last *American Bee Journal:*—

> To prohibit the use of glucose by law would be about as proper as to compel hotel-keepers to use first-class meat in hash, or cheap boarding-house keepers to debilitate the butter. If persons wish to buy and eat glucose, they have a right to do so: we would throw no obstacle in the way of buying it. But we do object to their buying and eating it for pure honey or syrup, or any thing except what it really is. If buyers inquire for glucose, let them have it; if for honey, sell them honey.

Now, if that is not exactly where I have always stood in the matter, it must be I do not see things straight. It looks to me just as if friend Newman had come over to my position; but very likely it seems to him I have gone over to his side. Never mind, so long as we are agreed.

BEES ON A RAMPAGE, AGAIN.

WHAT THEY DID, AND HOW IT TURNED OUT.

WE are taking your paper again, and it is like an old friend, as we used to have it when we kept bees in Iowa, 7 years ago. Reading the piece about a man dying from a sting, compels me to write to you about a little trouble we have had. A five-year-old chap belonging to a neighbor of ours who has a big ranche, and has all kinds of men, Chinamen among the number, at work for him, is always ready to "help." These workmen are not very choice in their use of language. One day this little five-year-old was with a Chinaman, helping to hive a swarm of bees, and, running under the limb where the swarm was, the bees fell on him; and as he threw up his hands to brush them off, they of course stung him. His mother hearing his cries, ran to him and got him to the house and brushed off the bees, and pulled out 13 stings from his neck. Not knowing what else to do, she poured out a teacupful of strong whisky, which they kept for medicine, and made him drink nearly all of it. He was getting stupid from the poison of the bees, but after drinking the whisky, and having a rag wet in the liquor wrapped around his throat, he revived, and was seemingly out of pain. His mother, now that the need for action was over, gave way to tears, and through her sobs asked, "How do you feel now, Odin?" "Oh, bully! give me some more whisky," was the answer, which effectually stopped the tears of his mother, as she had to laugh. They kept the cloth wet with the whisky, and the next day the child was all right.

I do not like bees myself, for the stings make my flesh swell so badly, and I can not eat honey, so I should not care if there were no bees in the world, as far as I am concerned; but my husband likes them, and my boys like mamma's honey-cake, so I am interested in the little nuisances for their sakes.

We have about 85 swarms. We have kept bees for 19 years, but never had them act mean until once last year. It was a pretty warm day, and about one o'clock, when my husband heard an unusual noise at the pig-pen, where we had about 150 hogs, big and little. The bee-hives were about two rods from the pen. When he got to the pen he saw that one sow, with pigs, in a pen by herself, was running about very much excited; so he went to her and found that the bees were stinging her and her pigs. He then kicked off a board and shoved her out of the pen. She ran around the large pen, the bees after her, and in two minutes the bees had come out in swarms and commenced stinging the other pigs. They got so frantic that they just raged around. Mr. Hilton opened the gate and tried his best to drive them out of the pen into some green barley growing near, but did not succeed till he had come to the house and got my help, and it was all we could both do. The bees were just thick in the air and on the hogs. After we had got the hogs out we went to picking up the poor little ones that were literally covered with bees and stings, especially back of the ears and between the hind legs. We put them in the chicken-house and threw wet sacks over them, then went to see to other things. Out by the barley we had four horses tied, and I saw that they were getting excited, and my husband had to go quite over a large hill before they left them. Then the cows we had staked out had to be moved. Feeling tired, I came to the house, and there were my two turkey gobblers, half crazy from bee-stings. I had to catch them, pull out the stings, and put a wet sack over their heads. The dogs were whining and trying to hide from the bees, so I threw water over them, and then went to see about the little pigs. I found about 20 in misery; 3 or 4 had spasms, so Mr. H. killed them; then we went to pulling out stings, but they were so badly stung, and had had to suffer so long, that 12 died during the week. My turkeys were almost blind a week. I had to make bee-hats for us all, for the bees would hover around the door of our house, and woe unto those who stepped out without a hat, for one whole week; and at the end of that time one pitched on me at the well as I was drawing water, and stung my face. I only had on my sun-bonnet. We do not know what caused them to act so, unless it being hot they felt cross; and as they were eating out of the sow's trough, she fought them and made them mad. MRS. J. HILTON.

Los Alamos, Cal., Aug. 10, 1881.

My friend, you certainly *did* have a sad time with the bees, but it seems to me you have mentioned one thing far more dangerous than all the bees in the world. Sooner or later, that boy will have an ungovernable appetite for whisky, and the one act may send him to a drunkard's grave. I feel quite sure that no bad consequences would have resulted from the thirteen stings had nothing been done more than to pull them out. I also feel quite sure, from the experience I have had, that the outward application of whisky had nothing to do with the recovery. Nor, indeed, am I sure that even wet cloths are of any advantage. I have tried keeping a painful sting wet with water, but I can not see that it affects it at all either way. The scene with the pigs was strikingly like the experience of our Mr. Merrybanks' neighbor, when he was first introduced to our notice.

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SQUARE MEN.

SOME SUGGESTIONS IN THE MATTER FROM THE BRETHREN.

YOUR editorial headed "Square Men," is a capital idea. I had been thinking for some time past about suggesting something of the kind, and I am glad you have taken the steps. Start that list at once, friend Root, and let every one pay you for the space taken in your journal—say so much a year, as it is for your queen column, and also so much for your trouble and expense for procuring the standing of each. Then besides, let every one give bond or security of some kind. Now, would it not be fair for every one who has to complain of a dealer, to give his name? Let every one come right out with the facts, and give the names, as then it may bring more promptness, etc.

Bayou Goula, La., Oct. 6, '81. P. L. VIALLON.

SQUARE MEN.

I see you propose publishing a list of the square dealers, also one for those who are crooked; and, say, let it include every one among our bee-men who advertise any thing for sale at all. Your object is to give protection to your readers and purchasers, which is very good. But, how about your advertisers? They are the *few* among the *many;* they pay for the privilege of advertising, and surely you owe them the same protection from crooked customers. GLEANINGS for Oct., page 502, gives a case of crookedness. I have been doing business, advertising and dealing with entire strangers for about eight years, and I am pleased to be able to say that, in all that time, I have found only *two* customers that I know or believe to have practiced fraud (a pretty good showing, is it not?) JOS. M. BROOKS.

Columbus, Ind., Oct., 1881.

Many thanks for your kind words and suggestions, my friends. I knew, before I started the idea, that you two at least would be in favor of it, for in all the business you have both done, I have never, that I remember of, heard a single word of complaint of either of you. Square men will most emphatically vote for such a list; but those who know their past records have not been square with their customers, will fight terribly against it. I presume you little imagine what a shower of invectives will come down on the bald head of your old friend, should I attempt to carry out even a part of the programme you propose. I spoke of advertisers only, because the list would be so very large, did it embrace purchasers as well. Shall we not rather publish the names of the "dead beats," and say nothing about the good ones? Suppose you, friend Brooks, write to the two who defrauded you, that, unless they settle up, you will have them published. If they have any defense to make, propose arbitration, and publish only those who decline arbitration, or who won't answer at all any way. There is another class, who are so very slow in fulfilling a promise, that it seems it would be a great kindness to the masses to tell them kindly they must be published as "slow coaches," unless they brighten up and do better. In answer to friend Viallon, I would say that I want nothing for my trouble in the matter. The fact that I am helping the supporters of GLEANINGS will be pay enough. Neither have I any objections to speaking right out, after the delinquent has been fairly notified, and neglects to do any thing in the matter. What are the wishes of our readers?

FRAGMENTS FROM AN A B C SCHOLAR.

ALSO CONTAINING SOME QUITE IMPORTANT HINTS FOR THE VETERANS.

I WANT to second the remarks of Mr. Hutchinson on page 319, July No. of GLEANINGS in reference to building up an apiary in a hurry, and reaping no benefits from it the first year or two. Although I am but an A B C student in apiculture, I started out with the intention of making the bees pay all expenses, and I have done it. Last year my two swarms gave me two more, and 130 lbs. of surplus honey. Now I have 12 colonies and 540 lbs. of surplus, worth $70.00.

HAVE THINGS READY.

This thought came into my mind while reading Geo. W. Burridge's article on page 327. Now, instead of running after a hive when a swarm comes out, I have my hives all set on their stands in advance, nicely leveled up, and frames handy, so that, if a swarm issues on the Sabbath, as fully one-half of mine do, I can take care of them in short order.

I use the Roop hive with double walls, so they do not heat up much inside, and the bees go right to work.

SAWDUST FOR PACKING HIVES.

I see a good deal in the papers about using chaff, leaves, etc. Now, I use dry firm sawdust, from the re-saw in a planing-mill, and I am of the opinion that it is the best yet. It absorbs the moisture, and keeps a very steady temperature.

HOW LATE TO BREED IN THE FALL.

Friend Grimm, on page 328, tells us how late queens should be permitted to lay in the fall, if they are to be moved into the cellar. Now, will some one who *does winter bees* outdoors tell us about fall breeding? My bees bred till November last year, and commenced again in February. All came through the winter too.

TRIALS IN QUEEN-REARING.

I think this matter is not confined to Illinois. I have 2 colonies that are making the third effort to get a laying queen. After the first failure, I placed pieces of new bright tin near their entrances to quiet them, but a second failure was the result.

SWARMING BEES BY TELEPHONE.

You may laugh at the mere mention of such an idea; but, listen to one *who does do it*. I purchased a dollar telephone of Perry Mason & Co., Boston, last winter, also 300 feet of copper wire, and put it up according to printed directions — the wire extending from my house to my father's. Now imagine my surprise to hear, when the bees began their summer's work, an occasional sound as loud and similar to that made by snapping your finger-nail against a goblet. Now, this wire passes over one end of my row of hives, and whenever a swarm issues from a hive within a couple of rods of this wire, the tap, tap, tapping, that we, at both houses, hear 50 or 100 times per minute, soon brings some one to the scene of action. I was aroused once when half asleep, just in time to see which hive they came from. Now, I am so thoroughly convinced of the efficiency of the accoustic telephone as an aid in swarming bees, that I shall put one up next year to run parallel with the row of hives, so as not to be more than 20 or 25 feet from any of the hives. To make it convenient for my wife, I will put one diaphragm in the kitchen, and the other in the sitting-room. The wire needs to be drawn "taut," and not to make any short angles.

QUESTIONS.

Would it be safe to wax a syrup or vinegar barrel to ship extracted honey in?

In waxing barrels, could you not use less than 20 or 30 lbs. of wax, by putting hot water in with it, to keep it warm?

Is it possible for even a dollar queen to be jet black, and her *workers too?* I would like to know. I thought best to put the above question on this slip, as some might think, if it were in print, that I had bought such a one from you. Now, I call the dollar queen I bought of you last fall a black queen; but *I* may be mistaken. I know one thing: she pays the best of any queen I have. You may, if you choose, answer this in GLEANINGS in such a way that no one will think you have been suspected of making any such error. F. A. PALMER.

McBrides, Mich., Aug. 11, 1881.

I too, friend P., most emphatically indorse the idea of having things ready in our apiaries. If we get behind, and no hives are in readiness for the next demand, somebody is sure to bring some bees after dark, or something of that kind.—We have repeatedly made bees rear brood every month in the year, by flour feeding, and with no bad results that we could discover, until last winter.—Your plan of using the telephone is indeed a bright thought, and just as soon as you mentioned it I wondered I had been so short-sighted as to have never thought of it before. Our neighbor F. R. Shaw, of Chatham, is engaged in making telephones, and when I visited him a couple of years ago, he had several telephones coming into the room. While we were listening to the neighbors a mile away, in different directions, I heard a sound as if something struck the wire, and suggested a bird had flown against it.

"It was not a bird, but only a bee," said he.

"Why!" exclaimed I, "is it possible the weight of a bee could make a sound like that?"

"Just that, exactly," said he; but even after this, and during the talks we have had about a telephone to tell when the bees were swarming, it never before occurred to me that a single wire would do it. I have written Perry Mason & Co. for a sample of their dollar telephones, and we will see what can be done to furnish bee-men with a telephone that will be a tell-tale on the bees when they attempt to play truant. Many thanks, friend P., for the bright suggestion. By the way, does it not seem a little sad to think of so many young bees bumping their precious little heads against that wire when they are starting out for a jubilee?—Any kind of a barrel will answer for honey, so far as I know, if it is perfectly covered with wax. The wood, however, will not hold the wax, unless it is perfectly dry, and warm enough for the wax to soak into it, partially, as it were, and so using water would, of course, be out of the question. If the honey comes in contact with wax and nothing else, it can not well be injured; but any such barrels as you mention must be *very* carefully coated. I think, on the whole, I would rather risk the honey in tin; it is quite apt to taste of any sort of wooden package.—A dollar queen that is black herself, and produces black workers, would be a rather suspicious personage—something like a "white blackbird." We often have quite dark (or even black) dollar queens; but if they do not produce yellow bees, make a fuss about it, by all means, and by no means hesitate because the queen came from *us*, if such was the case.

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FRIEND WHITE'S REPORT OF HIS LOSSES LAST WINTER.

ONLY 13 SAVED OUT OF 130.

LAST fall I had 130 stands of bees all in good condition as to honey and bees; in fact, I never went into winter-quarters with better conditions for a success the coming spring. I have kept bees over 25 years, and never lost any during winter or spring, except by sheer neglect; but I must confess that the past winter has taken all the conceit out of me, as I thought I had the winter process down to a fine point in this section. My bees are hybrids and blacks; have used nothing but the Langstroth hive since 1856, except when a friend sends me a new kind of hive to try its merits. But of all that I have used, the Langstroth is superior to any.

I would not like to say positively what was the cause of the mortality among my bees, "for I might be wrong." But my opinion is, that last fall I had in my section a great many fall flowers, and as they did not seem to produce much honey, the bees, eager to store something, filled the hives with pollen. They had no place to store it, except in proximity to the brood-nest, as the hives were well stocked with honey. The cold spell lasting so long, they could not leave the cluster to procure honey at any distance from them, and that which was near them, being consumed early in the winter, they devoured the pollen, and, not being able to discharge their fæces, dysentery was the result, and grew worse as the cold lasted, death being the result.

The last fly my bees had in 1880 was Dec. 16th, and not again until Feb. 28th, 1881. At times during the winter the weather would moderate some, and the bees would crawl to the entrance and die. Very few hives seemed to die in clusters, but were scattered all through it and in the honey-boxes, which they left in a fearful condition.

SIZE OF ENTRANCES FOR WINTER.

I had the entrances to the hives all contracted to 3 in. by ½ in., by simply taking a piece of ½-inch lumber, 2 in. wide and 14⅛ long, cutting a notch in the edge 3 in. long and ½ in. deep, and then screwing it over the regular entrance. This I take away during the summer or honey season, replacing it again during the winter.

Now for the results:—

Thirty were in double-cased hives, with dead-air space all around; only one survived of 20 that had the honey-boxes on with honey-board. The one that survived had the dysentery very badly, but made me 80 lbs. surplus honey this season in boxes. The other 10 of the double-cased hives had no boxes on, but a double thickness of old sacking tacked over on the top edge of the brood-chamber, the honey-boards being left off; 4 of these survived, but had dysentery. One stand in a double-cased hive with the honey-board screwed down tight, with no top ventilation whatever, entrance 3 in. by ½ in., came through all right, and cast a swarm this season, and had no dysentery. One "National" bee-hive, with boxes left on, died with dysentery. Two box hives, no upward ventilation, died with dysentery. Four swarms in bee palace, boxes on top and one side, all died with dysentery. Two in the large Langstroth Observatory hive, with boxes on, both died with dysentery. Eight in hives made of ⅞ in. lumber, with super on top, same size of brood-chamber, 9 frames above and 10 below, with honey-board on, holes left open, 5 of these came through, and none had the dysentery, and the 3 that died seemed to have gotten their cluster divided, and neither half able to stand the cold alone. Eighty-two in hives ⅞ in. thick, with top or cap on, to protect the honey-boxes; one-half of these had the boxes on, and the other half had the holes in the honey-boards fastened up, with no upward ventilation; saved only 2 of this lot, and they had the boxes left on, and had no dysentery.

I saved only 13 from the 130 I had, and 3 swarms since, making 16 to commence the winter with. *All are blacks*, and I don't believe I have one trace of Italian blood left. I shall go into the winter the same as last; but rest assured that I will not have any pollen near the brood-nest. I shall go upon the principle, that if it's too cold to go after it in the side of the hive, they have no business with it. H. W. WHITE.

Broad Run Station, Fauquier Co., Va., Sept. 23.

Many thanks, friend W. You strike on one point that troubles me a great deal. It is the bees going up into the honey-boxes, up under the cap, or off to some remote part of the hive to die. Last winter, if a single cranny was left around the cushion, they were sure to leave the combs and crawl up around the wire cloth over the holes in the gable ends of the chaff hives, and be found there dead. Well, I have stopped this in seasons heretofore by sprinkling loose chaff around the corners. I did the same last winter, but they then died down in the combs. Well, when our friends speak of leaving the sections on all winter, I fall to wondering why the bees do not go up into them and die, as mine have done. You see, in friend W.'s case they did. I have wintered in the cellar, and in our sawdust-packed house, without any thing over the hive at all, and they wintered first rate. They did not get out and fly around the room, either. The next winter, however, they got out on the floor so badly I covered the tops of the hives with wire cloth. This kept the floor clean, and I believe they did tolerably well. Why do they stay on the combs at one time, and at another get off into the upper part of the hive, out on the floor, etc.? Is it that healthy bees stay in a compact cluster any way, and sick ones don't any way? I hope it is only pollen and nothing else that makes them sick; but I very much doubt that complete success is any thing that can be so easily reached. — In regard to the size of entrances: I do not think I shall again take pains to contract the entrances to the chaff hives. Those left full width last winter did as well, any way, and, I am inclined to think, a little better. I am pretty well satisfied our bees were blanketed a little too closely for such a winter. This may sound strange to some, but our reports are pointing strongly that way. I would give a good wide entrance for winter. I think friend W. would have done better had he left all his entrances the same as in summer. He surely could not have done very much worse.

The above report would point quite strongly in favor of upward ventilation, were it not for that one colony that came through all sound with the honey-board screwed down, and no holes in it at all. I confess this unsettles me. Friend W., were there no holes or crevices in that hive at all? Are you sure the honey-board was waxed down tight all around? Was there not an open crack in the hive somewhere? and did the hive stand right out with the rest? I presume of course there was no chaff cushions, cloths, or any thing of the kind over the honey-board at all?

HOW TO INCREASE 12 COLONIES TO 81, AND GET 1200 LBS. OF HONEY IN A SEASON.

SEE STATEMENT IN REPORTS ENCOURAGING.

YOU ask if I managed those 12 stocks so as to increase them from 12 to 81 myself, or if Mr. Wilson did it. Mr. Wilson is an intelligent old Scotch farmer, but don't know half as much about bees as I do, and had no hand in the management of the apiary, barring the fact that he furnished me many a good meal, for which he had no adequate recompense. I have done the entire work of both apiaries myself; during swarming time going over to the Wilson apiary each day after it was too late for swarms to come out at home, and keeping the Wilson apiary in shape so there was no danger of swarming there.

My colonies were very weak in the spring, but I had abundance of empty combs, and the season was exceptionally good. The increase was entirely by artificial swarming, and the plan was mainly as follows: From the hive containing my best queen, say June 1, I took away most of the brood, and gave, in place, empty combs. In three days I could take away one or more combs filled with eggs, ready for queen-rearing. June 1st or 2d I unqueened one of my strongest stocks; June 4, I took away *all* its brood, leaving all the bees, and gave to it the frame or frames of eggs already mentioned, noting carefully on the top-bar of the frame the time of giving the empty comb to the best queen, and the time of taking away. From this stock I obtained my queen-cells. June 13th I unqueened another of my strongest stocks, and June 14th, in each comb containing brood, I inserted a queen-cell, and fastened in the bees at night. June 15th I took this hive over to the Wilson apiary, and for each frame of brood I started a new colony by simply placing in an empty hive the frame of brood with its queen-cell between two empty combs, and then closing up with a division-board. Of course, each frame of brood had its bees adhering to it, and these, being three miles from their old home, would stay wherever put. In the Wilson apiary I had 3 full colonies to start with, and from these I could draw, from time to time, frames of eggs without crippling them. So in a week after forming my little colony of one frame, a frame of eggs was added, or brood if it was to spare anywhere, for I made it a rule, in general, to take nothing but eggs from any colony, unless it was necessary to keep it from danger of swarming. In a few days, more combs could be added, and soon the new colony could in its turn furnish aid to later-made colonies. Having two apiaries is an advantage in making new colonies, and if I had only one apiary I am not sure but I should take one or more colonies 2 or 3 miles away, leave them 2 or 3 weeks, then bring them home, and divide up for new colonies. In that way you get about the right proportion of old and young bees in each nucleus.

I had no idea of taking any honey from the Wilson apiary; but by starting my last colonies in the latter part of June, I thought I could easily, by feeding, get them ready for winter. But as the season was so good there was no need of feeding, and as one after another of the hives became too full, I took from them frames of brood or honey, and gave to the weaker ones, until all had 9 or 10 Langstroth frames full; then, as the harvest continued, from sheer necessity I kept one outside frame in each extracted, not disturbing the other frames. In this way I increased the 12 colonies to 81, and obtained over 1200 lbs. of honey.

The amount of honey stated may not be exactly correct, but I think it will be over rather than under the estimate. I can tell better after it is all weighed. Of the extracted, part was actually weighed; the remainder in stone crocks was estimated at 10 lbs. to the gallon. The comb honey was in 1-lb. sections, and estimated at 1 lb. to the section. I have already weighed 1366 sections, and they overran weight some 20 lbs. In ordinary seasons, with separators, they will not average quite a pound, but in a flush season they are filled fuller. **C. C. MILLER.**

Marengo, Ill., Oct. 11, 1881.

If I am correct, friend Miller, you not only got all your queen-cells from your large home apiary, but a frame of brood with each queen-cell? If you used from your large apiary 59 frames of brood, each containing a queen-cell, I do not know but that I could do it myself, with a steady flow of honey. In any case, my friends, I tell you it is a wonderful way to make money, at the prices bees have brought this past season, even if you have to feed all the time. You will note the plan of working is just about the same as that given in the A B C, except having two apiaries two or three miles apart. I am inclined to think we can so manage as to avoid the necessity of so much traveling back and forth; still, friend M. may be right.

NO BROOD OR EGGS IN OCTOBER.

ARE THEY QUEENLESS?

I HAVE been fixing my bees for winter to-day. I have 3 stands; the best one is a nucleus that I bought of S. D. McLean & Son, of Tennessee, last spring. It is very strong. As I was handling them over I noticed several drones among them. I saw no brood except some that was just hatching. Would you consider that an evidence that there is no queen? **S. A. DANLEY.**

Friendsville, Susq. Co., Pa., Oct. 11, 1881.

Friend D., your letter reminds me that I should have mentioned, last month, not to decide a colony queenless just because no brood could be found in the months of Oct. and Nov. Almost every fall, more or less of our readers will order queens, saying they found a queenless colony just as they were fixing them up for winter. Old colonies almost invariably stop breeding at the approach of cold weather, and young ones often do the same, unless the colony is fed. The presence of drones in a *strong* colony need not disturb you, either. A few days ago, John reported that our Hayhurst Cyprian queen had stopped laying, and that even feeding did not start her up. I replied that I thought it was all right, and looked into quite a number of other stocks and found them without brood or eggs also. I then looked into Neighbor H.'s little apiary, and nearly all his stocks were broodless, although they had been fed heavily. To my surprise, his albino stock was in the same condition, and the queen was so small one would say she was not fertilized, by her looks.

"Neighbor H., have you got any hives down in your River Apiary, full of brood?"

"Yes, sir, 'ee! I have just that."

"Well, next time you go down, I want to go just on purpose to see a hive full of brood. There isn't any in our apiary."

"I know there is in my five hives."

"You'd better look."

He looked, and was astonished.

"Have you been feeding that albino stock right along?"

"Why, yes. I fed them a whole big panful only day before yesterday."

We went down to the River Apiary. He opened hives that contained brood the day before, but, although they had plenty of brood and eggs the day before, there wasn't a "brood or egg" in the hive, to be found.

"Why, the little rascals have taken it all out to make room for the syrup I gave them last night. Who ever heard of such a thing before?"

"I have heard of it, but I never saw it before. Langstroth says, in his book, that the passion for stores is greater than that for brood, and that they will, if crowded, remove both brood and larvæ, to make room for more honey."

The next day, H. came to me with the astounding statement that those hives had got their eggs, and *brood too*, back again. They only covered it up with syrup to get that panful all into the combs, and after it was all safe, then they took the syrup off the brood and eggs, and went on with their household duties. If you think this is too much like a "yarn," just pitch into Neighbor H.

Moral.—Be careful how you decide a hive to be queenless just because you can't find eggs or brood.

WINTERING AND VENTILATION.

HOW can we most successfully winter our bees on their summer stands? This question has been variously answered in days past by different writers, each endeavoring to bolster up some pet theory, and, generally, after a single season's experience. Ventilation and non-ventilation have had and still have their champions, and various plans have been tried, with more or less success for the time being, to carry colonies safely through cold weather. The experience of the last winter, as shown by reports given from various sections, goes, however, to show that all means as yet suggested have failed in many instances, while many colonies, wholly unprotected, have safely passed the rubicon. From all this we might conclude that there is no need of any protection at all; but careful apiculturists will continue their experiments until at last the best (if not always successful) plan will be devised. The matter of ventilation as yet is no better understood in regard to the hive, than to our dwelling-houses; but the majority of those who have given attention to the matter, conclude that the hive should be ventilated in much the same way as we ventilate our dwellings; that is, by arranging them so that warmth may be retained, and all bad air and superfluous moisture be allowed to pass off without allowing a direct draft of air to pass through the hive. True, the bees try to stop up every passage by which air may pass out of the top of the hive; but it strikes me that this is not done to prevent ventilation (for they are always ventilating), but to prevent rain from coming into their abodes, in a state of nature, where they are obliged to take up with such shelter as they can find; but we, when we provide them with shelter, can make it rain-proof; but the instinct of the natural state of the bee has not been eradicated by domestication, and it follows the old plan, I suppose, because it remembers how its *grandmother did* years ago. The great trouble we find is in getting rid of excessive moisture, and preventing it from freezing in the hive; and by correctly answering the query, "How can this be done?" we solve the problem at once. In order to do this I would give the bees a warm hive, well protected by double walls, filled with some proper material, or by chaff division-boards, thus protecting them from sudden changes of heat and cold; make the colony strong enough with young bees to cover every comb—not less than five of standard L. size, at least 5 lbs. of proper food to the frame, with winter passages through them; a honey-board on top of frames, with from ⅜ to ½ inch of air space between frames and honey-board; eight to ten inch holes in the honey-board, covered with carpeting or burlap, and the whole protected by chaff cushion, 4 to 6 inches deep, to keep the warmth within the hive and still allow all bad air and superfluous moisture to pass imperceptibly from the hive. By this means the bees are kept warm, and protected from sudden changes, and, I think, will be caused to pass safely through any but an exceptional winter, and the least percentage of loss will follow.

J. E. POND, JR.

North Attleboro, Bristol Co., Mass., Oct. 13, 1881.

Bee Botany,

OR HONEY PLANTS TO BE NAMED.

INCLOSED please find flower and leaves of a tree that grows in my dooryard, that the bees work on wonderfully from daylight to dark; the bees wake me up in the morning by their buzzing. The tree stands by my room window. Please name.

T. F. SHEPHARD.

Town Hill, Luzerne Co., Pa., June 28, 1881.

The plant is not familiar to us, and here is what Prof. Beal says of it:—

These plants are *staminate*, and lack pistils. It seems to belong to the maple family.

Michigan Agricultural College. W. J. BEAL.

What is it called in your neighborhood, friend S.? The leaves are oval, pointed, and grow opposite each other, perhaps 2 inches in length. Flowers in clusters, each flower but little larger than a pinhead.

Please name the inclosed honey-producing flower. It opens about 5 o'clock, when every flower will have a bee on it. CHAS. E. MCRAY.

Canon City, Col., Oct. 10, 1881.

Prof. Beal answers as follows:—

This is some species of *Mentzelia*, and belongs to the family *Loasaceæ*, which is somewhat nearly related to the Cactus family. It has no good common name. W. J. BEAL.

THE LANGSTROTH FRAME.

FRIEND ROOT:—I am very sorry that Mr. Southwick takes the subject-matter of my article on the L. hive just as he does, but as I never heard of him before, and certainly never knew that he had a frame, I think I may be exonerated from the charge of attempting to disparage any invention of his. I am, however, at a loss to know, from the description he gives of his frame, what he has in use, unless it is a 1-lb. section with a tin bail, and a shingle nail in each lower corner for legs. I can't think he has legs on his frame, for I should suppose they would be in the way unless they folded up, and that would make too much rigging to suit me. I am perfectly willing now to take back what I said; viz., that, "so far as I knew, every body admits that the L. frame is the easiest to operate," for *one* person does not think so. Well, that does not alter my opinion, neither does it alter the fact, that the form of the standard L. frame was devised by the king of us all, after experimenting in a careful manner, and by using brains of a superior quality in arriving at the conclusion he did in regard to the matter.

I have been keeping bees, more or less, for fifteen years, and have, like many others, gone in for the various improvements (!) that have from time to time come up, but have at last discarded every thing in the shape of a frame, except the standard L., for the reason that I find that it more fully meets all the requirements of a perfect hive than any other I ever saw or used. I find no trouble in taking it from the brood-nest, or setting it down, and I don't know that I ever crushed a bee in using it, when at all careful; and for that matter I can't see what difference the shape of a frame makes about crushing bees when you set it down, for, no matter what the shape is, if you set a frame of comb weighing from four to ten pounds down on your bees, you will stand a good chance of crushing some of them.

The only object of my article was to show that, in one instance at least, the L. hive had wintered a colony of bees successfully for a series of years under the most adverse circumstances in which it could be used. J. E. POND, JR.

No. Attleboro, Bristol Co., Mass., Oct. 12, 1881.

THE L. FRAME, AGAIN.

As you have asked me a question before your readers [p. 502, Oct. No.], you can not refuse me the privilege of answering it before your readers. I merely wished to let Mr. Pond know that all bee-keepers do not worship that idol. Did you not know, friend Novice, that Michigan is paying a competent man a big salary to examine and experiment on bee-hives and frames, and he (by his action, at least) has condemned the L. hive and frame? Such is the fact, yet we frequently see in GLEANINGS the L. frame lauded to the highest. I have a hive and frame of my own construction; it is not patented, nor am I making them to sell. I have frequently been asked to make for others, but have refused, as I had all I could do to make my own, but would lend them a hive, and they could make their own. I do not claim that mine is the best. I presume there are those in use as much better than mine as mine is better than the L. And now, friend Root, let me advise you to lay aside your prejudices; let reason and good sense take the place.

DR. E. B. SOUTHWICK.

Mendon, Mich., Oct. 4, 1881.

I beg pardon, friend S., if I was rude, or if I have seemed unduly wedded to the L. frame. Some of the brethren have accused me of continually changing from one frame to another, and of late I have thought it would become my old age (?) to learn to be a little more stable. In advising the A B C class to stick to the L. frame, I did it about as I would advise them to make a wagon so the wheels would track with the rest in common use.

The "Smilery."

This department was suggested by one of the clerks, as an opposition to the Growlery. I think I shall venture to give names in full here.

WELL, friend Root, I presume you think I must be a nice little boy for not writing to you sooner; but I have an excuse, so listen. In the first place, I was not at home; I was called to Pekin (county seat) "courting." After I got through I went to Eureka, Ill., on some little business; but when I came home my little wife told me the extractor had come, and she had been practicing with it. Well, sir, I was perfectly surprised after I had tried it. Had I known, two years ago, the value of an extractor, I would have had one. I just think it's boss.

Now, in regard to that pound of bees and queen I got from you in July, 1880. I will tell you how I prospered. Well, when I received them, I left them in the cage till evening, and then I went to one of my hives and took two frames of brood and honey; put in empty hive; put bees and queen in; next morning I took a look, and, to my surprise, all the brood I gave them were hatched; so at noon I took another look, and found the queen had deposited eggs in all the cells where the young bees had hatched, and so I gave them another frame of comb and frame fdn., and in the fall, when I prepared them for winter, I took from them 19 lbs of honey, and left them the rest. I wintered all O. K.; did not lose a stand. I can't account for it. Every one around here lost all. One man lost 72 stands, all he had. I was the lucky one (this winter may be the unlucky one). Well, friend Root, I don't believe there will be any of those bees that will winter that you have sent to Washington this summer, and I will tell you my reason. In the first place, one man bought 9 lbs. from you (queen with every pound;) I don't think they have one pound of sealed honey; in the second place, they are weak—too weak to winter. If they come through all right, I am going to inform you of the fact.

My bees are all right this fall; hives crammed full of bees, and lots of honey; not much surplus. From one stand I got over 200 lbs. of honey; box hive; bee-keepers say they can't believe that; they smile if I tell them so. But it's all right, as long as I get it. WM. H. SCHEIDEL.

Washington, Tazewell Co., Ill., Sept. 27, 1881.

So it is the *neighbors* who smiled when you told them of over 200 lbs. to the hive, was it, friend S.? Well, I rather think you smiled too, after you got alone by yourself, may be; at any rate, I think your letter will do quite well for the Smilery. I have been looking for one for this department for some time, and I wish you would ask your little wife if she does not think your letter does very well here. I presume of course the courting you did at the county seat was not of such a nature that she would in any way object to it.

Bee Entomology.

Or Enemies of Bees Among Insect Tribes.

INCLOSED in cage you will find a variety of bees that friend Haskell and I would like to have you tell us about. If you notice, the larger one has a very broad abdomen and long tongue; is very quick, and gathers honey fast, and is shorter than the black bee. The smaller ones are not so active, but seem to gather pollen very fast. They all were working on goldenrod. If you can give us any information, please do so. H. DORMAN.

Geneva, Ashtabula Co., O., Sept. 8, 1881.

It was our impression that the bees were only common wild bees; but we sent them to Prof. Cook, who replies as follows:—

Dear Friend :—The small bees are "mason" bees, and in Ohio the past summer have been quite serious pests as robbers of the honey-bees. The larger bee, with yellow hairs underneath, is a "tailor" bee, See *Manual*, p. 36. A. J. COOK.

Lansing, Mich., Sept. 15, 1881.

I send you by to-day's mail a large fly that I caught in the act of sucking a honey-bee. It is smaller than the average of its kind. Please give name, and oblige. W. S. HART.

New Smyrna, Fla., Oct. 4, 1881.

The large fly sent by W. S. Hart, of New Smyrna, Fla., is *Mallophora bomboides*, Wied. It is described in 4th, 5th, and 6th editions of *Manual*, p. 298. It is one of the worst of the robber flies, but does not exist, so far as I have learned, north of the Southern States. A. J. COOK.

Lansing, Mich., Oct. 12, 1881.

Juvenile Department.

I AM a boy 11 years old, and just getting over the diphtheria. I have one swarm of bees; mine have gathered 25 or 30 lbs. of honey since the rest gave up work. I call it a red-clover queen. Papa takes care of my swarm for me. I have got a grapevine in front of my hive, that I think as much of as I do the bees; it is the Worden. Papa says that I may have the 27 cts. you owe him, to get me a handkerchief. Please send me one of your 25 ct. silk ones, and one that will not fade, if possible.

Bellows Falls, Vt. RUEL E. CLARK.

You must learn to handle the bees, Ruel, so they will not sting you. I am glad you think a great deal of your grapevine. It is the vines and hives we think a great deal of that give us the great crops of honey and grapes. If the handkerchief fades, just write me a letter and let me know.

I am a girl 11 years old. I would like to write and tell you some of my daily work. I help my mother in the garden, and take care of the blue-eyed baby; and at my spare time I put starters in my pa's honey-boxes. The bees are doing well. Pa took off 70 boxes of honey to-day. I think your Home Papers are very nice. We have to go a mile and a half to our Sunday-school. I hope these few lines will find you as well as they left me. MELINDA NEWMAN.

Glenn, Allegan Co., Mich., Sept. 1, 1881.

Well done, Melinda. You know the Bible says, when one is faithful in the few things he has to do, God will give him more to do; and I should think, from your letter, you have been very faithful indeed. Kiss that blue-eyed baby for me, and tell her the kiss was sent by her uncle Amos.

Well, Mr. Root, that was an oversight in me not to give you my address. I will write to you again. We have had a long dry spell of weather. Our bees have had very poor pasture. My pa has been feeding them this fall. You wanted to know if my bees were yellow. My new swarm is just as yellow as gold. That is the queen we got from you. She has a hive full of bees. They are perfect beauties. Now I will tell you the way my pa winters our bees, as nearly as I can. He makes a platform 30x36 inches square. He makes them out of boards and 2x4 scantling. The bee-hive stands on the platform all summer. He builds the house and cuts the slot for the alighting-board to stick through to let the bees come out and in as they please. He places a little board with a block on each end of it between the bee-hive and the rough box on the alighting-board. That little board is to leave the entrance clear so the bees can go out and in as the weather permits them. He fills in between the two boxes with straw, and sometimes he puts old carpet and rags in.

JULIA BANNON.

Archie, Venango Co., Pa., Oct. 5, 1881.

Now I am pretty sure, Julia, you saw your pa do all that, or you would not be able to tell it so well. Perhaps you helped him. At any rate, you have told it so plainly I presume almost any one can understand it. I believe it is a very good way to fix them, where one has no chaff hives. Your address is all plain this time.

I am a girl 10 years old. I have never been to school, except two or three months. I spell and read in the Second Reader. I have a mother and five brothers. My father is dead. He died when I was three months old. My brother Jeff takes GLEANINGS. He has 8 hives of bees.

CLARA E. WERNER.

Riverside, Wallace Co., Texas, Oct. 9, 1881.

Now, Clara, I am sure your brother Jeff must have a great deal to do, and I think it will be just the thing for you to learn all you can about bees, and help him all you can. Who knows but that you may some day be a great bee-woman, like Mrs. Lucinda Harrison, who writes to you children almost every month.

I have been induced to write to you through reading the juvenile letters in GLEANINGS. My papa keeps bees; he has 8 hives. I sometimes help him with the bees. I keep the smoker lighted for him. It goes out when he sets it down. I wear a bee-hat, and don't get stung. My papa has had bees two years. He lost one last winter. He got a nice lot of honey this summer. I am only 13 years old. Please excuse this letter, as it is the first I ever wrote.

JOHN K. BROOKS.

Conshohocken, Pa., Oct. 12, 1881.

Your letter is very good, John, but I hardly think I could say as much for your father's smoker, if it goes out every time he sets it down. What kind of a smoker is it, and where did he get it?

CANDY FOR BEES OR QUEEN-CAGES.

HOW TO MAKE IT WITHOUT HEAT.

FRIEND ROOT:—I give to the readers of GLEANINGS the *modus operandi* for making candy for queen-cages like the samples I sent you (in the cages). Take coffee A sugar, put in a dish or pan; crush all hard lumps; add a little water, then work with a thick knife or spoon, until the grains are reduced, and the mess has the appearance of a very thick paste, when it will be ready to put into the cages. Caution: There are spurious brands of coffee A sugar in the market, which will not make solid candy, but crumble every time. Buy the strictly standard coffee A sugar, from some reliable dealer. Don't put all the sugar in the dish at your first trial, because you are liable to get your candy paste too thin; if so, put in the remainder of your sugar, and make it just right.

My bees have been adding to their stores right along during this fine weather, but I have not had time to find out from what source they get it.

Marietta, O., Oct. 14, '81. R. STEHLE.

I think I would use granulated sugar instead of the coffee, on account of its being nearer chemically pure sugar. One important part of the matter is the mashing of the grains into a fine paste; and I am inclined to think a little heat would facilitate the process, if one had much to do. To have this candy get hard quickly, it should be spread on a board, or in some kind of a tray, because the wood absorbs a large part of the water. It should also be in rather thin or shallow cakes. If not, it will dry over the surface, forming a crust, while the inside is soft. I presume advantage might be taken of this fact, in using candy without water. The above process makes it so easy for anybody to make their own bee-candy, I think I shall take candy out of our price list. One great reason why I would advise you all to make your own candy, is to save the very expensive express or freight charges, where you have to send for it in such quantities as is needed to feed bees. Sugar is shipped by the barrel at a regular low rate of freight, to all grocers and merchants; but candy in small lots can not be shipped for any thing like these low figures. Of course, you can put the above candy in the wired frames, just as well as if it was boiled in the usual way, but you will have to wait a much longer time for it to harden. You can add flour, if you wish, and it will not hinder the hardening at all; but I do not think I would use flour for winter use, especially while there is such a great amount of prejudice against pollen in the brood-nest for successful wintering.

GALLUP AND HIS CALIFORNIA BEE RANCHE.

BEES IN CAVES AND SQUIRREL-HOLES.

AS I have a great many inquiries from parties in the east, wishing to come to California, about price of bees, healthfulness of climate, etc., I will endeavor to answer these questions partially through GLEANINGS by your permission. Bees can be purchased in nail-kegs from 50c to $1.00, and in all kinds of shaped hives, movable, immovable, and all kinds of frames and boxes, for from one to two dollars per stand, black bees at that, and some of them badly infested with moths; or you can go into the hills and take them out of caves, hollow trees, squirrel-holes in the ground, etc. I took out five swarms three weeks ago, and while digging out one swarm, another came and clustered on a bush close by. Last Sunday evening I found a small swarm clustered on a little bush. Where I have them located now they are gathering honey, building comb, and breeding rapidly.

I think I can raise queens almost every month in the year, and increase, but I expect the quality of honey will be inferior. Good stocks from practical bee-keepers are from three to five dollars each; depending somewhat upon the season of the year, whether spring or fall.

Every bee-keeper in California should have a ranche where he can raise fruit, vegetables, etc., or he should have capital enough to live upon through bad seasons as well as good ones, and he should be able to hold his honey or sell, just as he sees fit. Many start in with no capital, and perhaps run in debt for bees and every thing. Such parties usually fail, and their ranches are sometimes sold *very cheap*. There is a mistaken notion by people at a distance, and that is, they think that San Diego County is the best in the State for bee-keeping. That is certainly a grand mistake. That San Diego County ships more honey, usually, than other counties, is a fact; but that does not make it the best county. Mr. Harbison went into that county in an early day, and established his large apiaries, and others followed suit, before the other counties even commenced. If I should select to-day, for bee-keeping exclusively, I know of no better county in the State than Ventura, taking all things into consideration. As to health, Southern California can not be beat in the whole wide world, for you can select your own locality. From 15 to 20 miles takes you into the mountains, and you have your choice, coast, valley, or mountain. Some invalids are benefited in one locality, and some in another. Many hopeless cases, too far gone for any thing to help, come to Southern California; but such cases had better stay at home, and die among their friends. I have seen many an invalid that came to California a few years ago, and are now enjoying comparatively good health. A person can make a good living from a very few acres of ground as soon as he gets a little start, and almost without an exception the longer a person lives in California, the better he likes it. I have purchased 20 acres, for $30 per acre, in a beautiful valley, intending to go into fruit in company with my youngest son, who has just arrived from Iowa. He is perfectly delighted with every thing here, and so is his young wife. I shall probably keep some bees for pastime. I have not sold out my bees in Ventura County. I came into the State in 1878. That season was an extra good one for honey; 1879 was an entire failure; 1880 was good; 1881 but little honey made, and in many localities a complete failure. Good honey (extracted) is now selling in San Francisco from 10c to 11c, and retailing at about 15c. There need be no loss of bees, if they are managed as they should be, in any season. They will be self-sustaining. Where I am locating my bees now, they will store honey, and increase, the poorest season that was ever seen in California; but it will be lowland honey instead of mountain. In the mountain apiaries there is scarcely ever any swarming after the 1st of May. E. GALLUP.

Santa Anna, Cal., Sept. 21, 1881.

FROM THE BOX-ELDERS.

SEATED under the vines that hang on the shady side of Mr. Duster's honey-house, that gentleman opened the conversation by saying, "This season has been a somewhat unusual one in many respects, and especially so as regards the honey crop. The spring opened late; it was the middle of April before I got my bees out. I felt very uneasy about them, for when I placed them in the cellar I do not think the hives would average more than 15 lbs. each. I had requeened them late in the fall, and they went to breeding; this used up their stores so that when I moved them into the cellar I was surprised to find them so light. However, my bees came out all right, except one swarm, and went to work in good earnest at once, taking flour only two days, and after that bringing in natural pollen. In about four weeks the hives seemed full; never saw bees increase faster, and recuperate from their winter confinement quicker. The white clover, from which we expected most of our honey crop, came in abundance, both in the grove and prairie, but hardly a solitary bee visited it. I never saw it so common when it did not secrete more honey; I got but little from it. But, now came the

BLUE VERVAIN

to the rescue. Once in about five or six years this plant makes its appearance on the low lands bordering Inlet Creek, in great quantities. I had seen the young plants last fall peeping up their heads quite thickly on these lands, so I did not feel altogether discouraged at the loss of the white-clover harvest. I kept my bees, sections, hives, etc., well in hand—waiting."

Just here Mr. Duster called my attention to a hive of beautiful Italians, where the workers were marching out the drones.

MR. DUSTER MORALIZES.

"Just look at those drones the worker-bees are trotting out on that front board. That's what I call female ingratitude! That is just like humanity over again, as I see it. Nine times out of ten you will see a great big good-natured lubberly fellow, in whom there is no guile, mated to a little bit of female humanity, and yet it will not be a year before that little piece of femininity will be leading that big fellow around just as you see these little female bees do these big drones, and he will seem to like it too, eh? Look at that large beautiful golden drone yonder, with his great wings as bright and clear as isinglass, and that little insignificant female bee, just worrying the life out of him! See! she has got him by the nape of the neck; got him where the hair is short, and she won't let up; female instinct exactly, you see. Why, this is almost as good a 'moral' show as Barnum's!"

"I wonder," said Mr. Duster, continuing, "what these drones die of; the bees don't sting them to death, that's certain. See that drone on the corner of that board! He looks well, all right as to outward appearance, excepting that still, sad, melancholy way he has. I have no doubt he sheds tears as he thinks of the past, and then on his present forlorn, outcast condition; he would if he were not so big he's ashamed to; wonder if they don't die of a broken heart. Well, I declare! if there isn't a female bee creeping up that drone's wing! I've got it now; she is at his ear—they talk 'em to death! And now see here," said Mr. Duster, "if you ever hear of any one coming to a different conclusion, just let me know, and I will go for him worse than Heddon after the fellows who don't believe in his 'bacteria' theory."

Mr. Duster resumes his honey report.

"Let's see; where was I?"

"Waiting?" I suggested.

"Yes, you're right; and if that moral show had not got me off the track, I'd been through long ago. Well, I did not have to wait long before I had my hands full of business. It was nip and tuck between me and the bees, as my business was such I could leave it only half a day at a time, and now I will show you the results."

Here he opened his honey-house doors, and, piled in one corner, was a solid mass of 2-lb. prize boxes of the whitest honey I ever saw — a little over one ton from the 24 swarms of last spring.

"And now," resumed Mr. Duster, "let me tell you a little of my experience with blue-vervain honey. When this honey is put in a goblet, and held up to the light, you will hardly detect its presence, it is so clear. One would suppose it was thin, and perhaps watery, just to look at it; but it's about the thickest honey I ever saw, and its flavor is as fine as it looks, which is saying a good deal. Different kinds of honey, or, rather, all kinds, do not incline to granulate with me, as much as some years ago. I had a run of this vervain honey some six or seven years since. It had the same clearness and fine flavor as this. After extracting, it would begin to granulate in five or six days, put it where I would. I put up a quantity of it in Muth's 2-lb. glass jars for my own use, part with stopples and part without. They all granulated *in the cellar*, and almost every jar burst. In the spring I could pick off the glass and roll the solid cake of honey across the room without breaking. A Dutch friend of mine called it 'schstony.' This season it does not trouble that way."

Here our interview ended. R. H. MELLEN.

Amboy-on-Inlet, Ill., Sept. 27, 1881.

THE BIG RED CLOVER AS A HONEY-PLANT.

I HAVE often wondered, as I have read the discussions on honey-producing plants, that there is no reference made to what is known in this locality as the "big red clover." My experience with it has not been extensive, and I can not therefore speak as positively as I would desire to. My first knowledge of it was gained in this way: Some years ago I was passing a field of clover, not half a mile from my apiary, in June, and saw the bees working on it. I was surprised to find them working on the first crop of red clover. I got out of my buggy and went into the field, and found it alive with bees, generally Italians, but some of them were blacks. I was delighted, as I thought the bees would never lack for summer forage. In speaking afterward to the owner of the field about it, he informed me that it was the big clover which was in that field. Since that I have not seen a field of it; but one of my nearest neighbors sowed 18 acres with it last spring, and I expect my bees to have another trial of it next summer. On inquiring I find that the advantages and disadvantages of this species as compared with the common red clover, are as follows:—First, the bees can work on the first as well as they can on the second crop of the common red, perhaps better. Second, it grows larger, makes more hay or pasture. For this reason it is called the big clover. In other respects it looks like the common red clover. Third, it is better for soiling purposes on any ground, and will do well on thin land where the other clover will not catch. Fourth, it blooms ten days or two weeks later, and for this reason is better adapted to sow with timothy for hay, as they bloom and ripen together. This prolongs the honey season also.

Disadvantages. First, the principal one is, that it bears its seed on the first crop, and will therefore not produce seed and hay both the same season. Second, it grows so large it is almost certain to fall and become tangled. Third, it makes a coarser hay.

From this statement, it is apparent that this kind has not received the attention it deserves, especially from men who are wanting to enrich their farms, or to manage them for dairy purposes and honey. In another year I may be able to report more fully in regard to it as a honey-producer.

Milroy, Pa. J. W. WHITE.

HONEY FROM SMARTWEED.

POLYGONUM PERSICARIA.

AT this late day we are having the only flow of surplus honey of the season. Smartweed and buckwheat, delayed fully six weeks by the drought, are now in the best condition to produce honey. How utterly at the mercy of the elements, does the bee-keeper find himself! No flow of honey until the supposed productive limits of the season are reached; then a fair yield. No such circumstance has ever been known in this part of the country.

JEROME WILTSE.

Falls City, Richardson Co., Neb., Sept. 26, 1881.

We bought bees of neighbor Rice in July, until he would sell no more, saying he wanted a few stocks left for "seed." Well, he saved, to build up with, only about 25; and of these, I believe only 20 had queens in the fore part of July. Yesterday I was surprised to hear him say he had *eighty-one* good ones.

"Why, have you done all this by feeding?"

"Haven't fed a bit."

"You do not mean to say your bees have been gathering honey all this dry fall?"

"That is just what I mean to say."

"Why, where did they get it?"

"Well, as nearly as I can make out, they got it from smartweed, or blackheart, as we call the large kind. It has come up in immense quantities along the outlet to the lake, about 1½ miles from us, and the bees have been working on it strong through the whole of the fall."

I might mention here, that Mrs. Rice has been sending us so many nice queens this fall, that I inquired a little and found she had, besides this 81 of his, been using about 30 nuclei, and she has alone sent us about one hundred dollars' worth of queens. What do you think of that, ladies? Again: Last Sunday morning, as I was going down to the factory Bible-class, I heard a humming. When I saw what it was, I went after John, and, placing him right before a clump of blackheart that grows close to the depot, I bade him look.

"John, that is *polygonum persicaria* that those bees are working on, and 'don't you forget it.'"

The above is the Latin name of blackheart, or big smartweed. You can always identify it, for it has seeds like miniature buckwheat or beechnuts, for it is a member of the same family. Who knows but that these little buckwheat seeds are not of some value, so that it would pay us to raise the plant, aside from the honey? Smartweed griddle-cakes! just think of it! To come to perfection, the plant seems to need a great deal of water, and grows finely in swampy places along streams. I have heard that it is a great pest in corn-fields in the West. This clump by the depot, that the bees were making such a roaring on, was, however, growing right in some hard gravel that had been drawn from a gravel bank, to cover up the Medina clay. Each plant branches out, so that a single root will make a large bed of blossoms. I feel just now like starting a large bed of polygonum down by the pond, near the Simpson field. May be I shall never get to it, though. Perhaps you will, my friend. If you do, I want to see it when I get around your way.—Friend W., we want to be thankful for even a late crop, and make the most of it.

WHAT DADANT TELLS EUROPEANS ABOUT COMB FOUNDATION.

TRANSLATED FROM THE BULLETIN D'APICULTURE, BY W. P. ROOT.

THE first sheets of fdn. were made with a press, in Germany; but the impressions, not being deep enough, it often happened that the bees, instead of continuing the worker cells (which at best were but outlined), built drone-cells; defeating one of the chief advantages of this invention.

One day I learned that a New Yorker was selling sheets of fdn. I bought a pound for trial, for a dollar. The bees were no more astonished at the article than I; which, being made of paraffine, was very beautiful, though the bees hastened to throw it out.

Some time after, Mr. A. I. Root, editor of GLEANINGS, announced that he had made a machine, made with rolls, and offered for sale fdn., and afterward the machines. I tried the new fdn., and I was so well satisfied that I proposed to my son, who is my partner, to buy a machine to make up about 300 lbs. of wax which we had at that time. He consented, and we then started out in the fabrication of frames of artificial foundation.

No one then, not even the maker, knew exactly how to manage the machine. At times the sheets would come from the rolls with extreme ease; an hour after, they would all stick, and it was an everlasting job to clean out the dents in the rollers. But experience came at last, and, by adding remark to remark, we have succeeded in manufacturing smooth fdn. without trouble.

Soon a new machine appeared. Mrs. Dunham, a Wisconsin lady, produced rolls with deeper cells. Our business having extended, it was necessary to have this machine in order to have an assortment.

Two other kinds are made, but I have seen the work, which leaves much to be desired.

Then the press was reinvented, which, I think, is much inferior to rolls, and costs nearly as much.

At last, the wax-mold was invented. The plaster molds, which are dipped in a bath of wax, to fill them, mix with the wax, and are not durable.

We now come again to speak of the rolls at the bottom of the shallow cells. One can now obtain sheets of extreme thinness, which are used for honey in sections; but this article has limited sale, especially in France.

There are, then, really, but two makers in the United States who deserve serious mention; they are: A. I. Root, whose prices are,—

Machines for sheets	12	inches long.	305 millimeters	$100
" " "	9	" "	225 "	50
" " "	5	" "	125 "	25

Mrs. Dunham:—

Machines for sheets	13	inches long.	325 millimeters	$65
" " "	12	" "	305 "	60
" " "	10	" "	250 "	50
" " "	9	" "	225 "	40

Mrs. Dunham's machines make less finished fdn. than those of Mr. Root; but it suffices—at least, it is accepted by the bees. Root's machines are better finished, also more firm; those of Mrs. Dunham have been preferred on account of the thickness of the fdn., which prevents its sagging under the weight of the bees, or of the brood, or honey. But Mr. Root also makes them with deep cells when ordered.

With the Root machine (such as he makes without contrary orders), one can make from 6 to 7 feet to the pound. The Dunham machine can make only 4½ feet to the pound.

As I have said, I have had a Dunham machine sent to R. Denis, of Vendhuile, a member of our society.

Perhaps it would be well here to give directions to fasten the sheets in the frames; but I am afraid of abusing the kindness of the members of the Soc. de la Somme.

CH. DADANT.

DIVISION-BOARDS, IMPORTANCE OF.

WHEN I first began bee-keeping, I felt the need of an expansible and contractible hive, so that I might, without having two or three sizes, keep my colonies properly proportioned to the room they occupied; and for a long time I was greatly troubled for a way in which to overcome this difficulty. At last I studied out the remedy. It was division-boards. These boards, properly constructed and judiciously used, are important accessories to successful bee culture, and no apiary can be said to be well furnished that does not keep a stock of them constantly on hand. By their use, many stocks can be successfully wintered that otherwise would perish, and weak ones build up to strong ones that otherwise would have to be united with others in order to save them. This subject I deem of great importance to A B C scholars; and in order that they may know just what to use, and how to use them, "I arise to explain."

They must be made of some material that will retain the warmth generated by the bees, and I know of nothing better for that purpose than your chaff division-boards. They should also fit the hive closely on all sides, and as nearly air-tight as it is possible to make them. To use them, crowd the bees on just as many combs (I suppose that every one uses foundation in making new swarms) as they can well cover, and no more, putting the frames into the center of the hive and pushing the boards up close to them on both sides; then as the colony increases, push over a board and put in a new frame until the hive is completely filled. By this means a surplus of honey may be obtained from a new swarm that otherwise would have hardly gathered enough honey to winter on.

In preparing for winter, it is the easiest thing in the world to remove three or four frames from weak stocks, put in division-boards, and pack the empty room in the hive with some warmth-retaining material. How many colonies have perished in a severely cold winter, simply for want of the above precaution? I do not know; but I do know that I have successfully wintered colonies that could cover five frames only of standard L. size by using them, when far stronger colonies died, as I deem, on account of their being unable to generate the requisite amount of heat in a hive greatly disproportioned to their size; so I say, use division-boards.

Foxboro, Mass., Sept. 28, 1881. J. E. POND, JR.

I believe you are right, friend P.; but still I must confess my faith in division-boards has been a little shaken by the reports we have had this season, in regard to the advantages of much ventilation, and an open chamber over the bees. If a space above the bees is good, are we so sure, after all, that a large hive with a part of it unoccupied is not, during extreme cold like last winter, also an advantage? Our friend Jerome Wiltse almost says as much; and friend Grimm says, if I am not mistaken, that he would as soon have a comb as a division-board. I throw out these hints that we may look into our reasoning and see that there are no loose joints in it.

HOW SHALL WE WINTER?

THIS wintering problem is getting to be a very interesting one again, as the "risky" season approaches. Winter, like summer, with us is a season of hopes and disappointments, and this gambling is where the excitement of the business comes in. We hear persons saying that "we are going to have another cold winter;" others say, "a very open one;" and we say, "we don't know;" but we make our estimates based upon an average one with an average loss of stocks. Based upon this average, a colony of bees is worth three-fourths as much now as next spring. We calculate the care of them till that time, interest on the money, and also that of those that die, their hives and combs are worth one-third the fall value. You know, Mr. Editor, that we advertised some bees for sale. Well, sir, not one order have we received, and but two inquiries for the whole month, and we see the papers full of "Bees for Sale." Right here allow me to give a piece of advice to those having bees they are anxious to dispose of. *Hold them till spring, even if you leave them entirely uncared for.* I say this because it seems that those who neglect their bees succeed in wintering as well as any; and next spring, if every colony now alive should then be alive, bees will be a cash article at a good round price.

A friend of mine once asked a rich man how he made his wealth. His simple reply was, "I came here with a little money and I bought stock and grain when it was low, and sold it when it was high." How foolishly simple that sounds, and yet the large majority do just the reverse. They float with the popular current, instead of striking out by themselves and swimming up stream. Here, too, we find a large reward awaiting a little energy and originality.

On page 493 of this Oct. No. of GLEANINGS, Mr. Ballantine undertakes to disprove our pollen theory. If it is incorrect, we can think of no better time nor man to prove it so; but in my judgment he has overestimated the force of his argument. He seems to conclude, that because pollen is made from the fecundating dust of beautiful flowers, and has the honor of being a very *old* store of the hive, that it is fallacious for us to claim that this time-honored substance will produce disease, when used in an abnormal way and at disadvantageous times. I learn that the disease we call bee dysentery is also time-honored. A cancer is a marvel of order and beauty, when seen through the microscope. Who does not know that, throughout all the vegetable and animal creation, that instinct can not be depended upon for the perpetuation of life? How is it, when you slightly water a cabbage-plant in the morning of a hot day? It instinctively turns up its little roots toward the moisture it scents, and succeeds in getting little or none of it; but its death soon results form its more exposed position. How with the colicky, over-fed babe? Its instinct is to eat to relieve the pain produced by overeating. Instinct is at the bottom of the hill of progress: reason, at the top. Instinct is a crutch for reason when it gets lame. Instinct is blind: reason, a clairvoyant. Instinct swims: reason takes a steamboat. Instinct runs: reason creates and rides on a locomotive. Instinct stands with clasped hands, and fears disaster: reason prevents it. Instinct moves before its betters when reason approaches. Instinct is better than nothing: reason is better than either. Instinct is life or death, as chance may dictate: reason is life and success. Instinct has got its growth, gone to seed, and has long been decaying: reason is in the bud, and soon will blossom. Instinct is barbarism: reason, civilization. Reason produced frames: instinct fled for cross-sticks. Reason said, "Sling that honey, and save that indigestible comb for the bees: instinct said, "That honey is not what I am used to, and therefore it is not good." Instinct says to bees, "Go into a hollow tree, and attach your combs to rotten wood that will give way when you fill them with honey:" reason says to them, "Here, draw this sheet of securely wired foundation to a beautiful, straight, and profitable comb." The intelligent and successful apiarist says, "My bees must be guided by my reason:" the ignorant and superstitious one says, "I will follow your blind instincts." When reason says, "Forward, march!" instinct stands and howls like a little dog barking at a full moon. Let us hope that we shall hear no more pleas for *instinct*.

What refutes the whole argument made by Mr. B. is, that what he presents to us as causes of this effect, viz., cold and confinement (the peculiarities of last winter), were general all over the country, while the supposed effect was not as uniform as was his supposed cause. Something more local in its effects must have been the primary cause, while cold and confinement are the great aggravations of this cause. Finally Mr. B. admits that cold caused the bees to eat pollen, which caused the disease, and calls the pollen a secondary cause; and so, after all, all the difference there is between us is as to which plays first and which plays second fiddle. "Let us see." Pollen-eating will produce dysentery, and kill the stocks almost clean through the southern portion of Indiana, where no excessive cold of long duration, or excessive confinement, existed. The absence of pollen, in any position in the hive where the bees would be inclined to use it during confinement, allowed whole apiaries in Northern Michigan to winter successfully, where cold and confinement were existing in all their glory. Now, you can choose for yourself which shall be called the primary cause. I have made my choice. Time will decide, and I am willing to abide by the decision.

I have just read the article on "Upward Ventilation" on p. 497, by Jerome Wiltse. It seems to me that this article is worth the price of GLEANINGS for one year, to every subscriber. That makes a total value of $1419. At least, let us sincerely thank Mr. W. for his candid style, his energy in collecting the facts and figures, and his benevolence in giving them to us that we may profit thereby. I have experimented every winter of the thirteen that I have kept bees, and I have used different houses with thick-filled walls above ground, house apiary, cellar, buried (both above and below the surface), packed on summer stands with different styles of boxes, and used many variations with each and all of these methods, and have demonstrated and written that my bees neglected, often came out best of all. I have heard every plan for wintering bees praised and condemned by turns, and now the favorite chaff packing and cushions are being condemned, even when the bees are to be left out. My idea is, that any thing that will prevent the consumption of pollen by the hatched bees, will prevent the dysentery, which will prevent over nine-tenths of all losses outside of careless starvation. It seems more than likely that this great amount of ventilation reported in the successful cases by Mr. W. prevented the bees from breeding, and consequent handling of pollen. We must not forget, however, that there may be instances where honey is scarce and pollen plenty in the hive; that during cold spells, when the bees can not change position, they will go to eating pollen as a last alternative. I think the success of the large hives consists in the fact, that the size retarded winter brood-rearing.

I once lost all but 3 colonies out of 48; 46 of them had dysentery. One that had it squeezed through in a weak condition; of the two that did not have it, one was a box hive that was all split open in two places clear up the sides; also on top. It was wintered on the summer stand, three feet from the ground, and with no care. The other one was a frame hive, brought from a distant locality, where it summered alone, and placed on a square box in our cellar, with three other hives that all rotted down, so to speak, with dysentery in its blackest form, as did all the rest of the apiary in that cellar. This colony did not lose a dozen bees; and this and many other circumstances convinced me that the disease is *not* infectious.

Now, we all owe Mr. Wiltse, and all others who have given us their time and losses in experiment, a report of the very most comprehensive experiments we are capable of making the coming winter. Nearly all of us have notions now fixed, and let us disprove them the coming winter, if we can. There is no grander exclamation than to say, "I was mistaken, and hasten to own it, and assist the wheel of progress in its revolutions, rather than to hinder it." "Open confession is good for the soul." We need have no fears of treating a number of colonies in a manner formerly considered murderous; they may prove to be the strongest of all when spring comes. Our tests should be made on as large a scale as possible. We should also take advantage of and report our observations among our neighbor bee-keepers, as Mr. W. did. Then let us observe, decide, and report, without the least bias or care what we may have said and believed before. Let us be honest with our last and best thought. "This, to thine own self be true, and it follows (as the day does the night), thou canst be false to no man." I shall take a large dose of my own advice, and make as extended experiments as my 240 colonies will admit of. Then when the proper time comes, we will, by an interchange of experiences, show old Luck that we have taken another fort, and that it is only a question of time when he will be forced to an unconditional and complete surrender. JAMES HEDDON.

Dowagiac, Mich., Oct. 1, 1881.

SOME QUESTIONS FROM AN A B C SCHOLAR.

THE selected imported queen I ordered from you Aug. 27 came to hand Sept. 1, and at noon to-day she had about one card full of eggs. I was away from home when she came, but my wife introduced her according to directions on the Peet cage, and she is all right.

It has been very dry here for some time past, but there has been no time during the spring, summer, or fall months of the two years past, that brood-rearing has ceased in my yard. So you see we are rather favorably situated.

BROOD-REARING WHILE STORING IS GOING ON ABOVE.

How do you manage to keep up brood-rearing, and still get the bees to work in the crates? After trying this summer to get my bees to fill the crates, I have found the brood-chamber almost destitute of eggs, larvæ, and brood, and the chamber full of honey instead.

Do you advise extracting from the brood-chamber? and if so, how late in the fall? or how long before time for honey to cease coming in should we stop?

EMPTY COMB FOR BROOD-REARING IN THE FALL.

Ought there to be empty comb for brood-rearing after honey ceases to flow? If so, how much?

REARING BOTH DRONES AND QUEENS FROM ONE MOTHER.

As I now have an imported queen, how shall I insure the purest stock the coming year—by using her to raise both drones and queens, or would it be better to use my next best for raising drones? (I have a pretty good one.) How often do you advise changing the stock of queens to prevent in-and-in breeding? A man told me to-day he had found 7 swarms in the woods around here this fall—all Italians.

McBrides, Mich., Sept. 5, 1881. F. A. PALMER.

I would not extract from the brood-chamber, as a general thing. If your surplus receptacles are easy of access, as with the hives we advise, you will ordinarily have no trouble in getting the bees to move their honey out of the brood-chamber into these receptacles.—I have never found it necessary to put in empty combs in this locality, in the fall, but I presume in some places they get so much late honey it is an advantage.—I would by all means rear my drones from another queen than the imported; and if you do this you will not need to make any further change in stock. If you find good, well-marked Italians in the woods, there is certainly no need of buying any thing more in the shape of fresh strains of blood, unless it is an imported queen once in two or three years.

THE BEE-CAVES OF TEXAS.

THEY PROMISE TO BE NOT ALL PICTURES AFTER ALL.

I HAVE read with pleasure the many new ideas that have been brought out in GLEANINGS; am pleased at the clipping friend Hutchinson sent you about the bee-caves in Texas, and your idea that it should be developed. I think I can give you a chance to "strike it big," nearer home; and if it has not been disturbed lately, I think it equal to the Texas vein. My informant (an old rustic bee-keeper) told me that his father struck a bee's nest in the mountains of Pennsylvania, similar to the one in Texas, it being also in a ledge of rocks, and by a stream of water. Well, the neighbors got together and blasted off the rocks, and took out one or two kerosene barrels of honey, and then they would come to a partition in the rocks (another infringement on Mitchell's adjustable division-board). This they would blast out, and get perhaps an ox-cart full of honey; at any rate, they all got what they wanted, and there was enough left that ran into the creek to turn it into metheglin for five miles. You evidently see it is nearer a bonanza than Hutchinson's "scheme," for he has got to look his man up, while I have mine. He says these are the facts, if his memory serves him right! He is an old man, and ought to be truthful. Now, while friend H. is perfecting his organization, if you will help this old friend and myself (financially) I have no doubt that, while you gain the name of a philanthropist, we will make some money.

I got through the winter with 10 colonies—5 good ones and 5 very weak. They have increased to 33 colonies, and gave 700 lbs. of basswood honey. My wife has kept an account of every thing sold from the apiary, such as bees, queens, honey, wax., etc., and I have 30 good swarms left. Her figures show a credit of $112.00. I think I have something a little remarkable in hybrids. My drones were pure Italians, while friend Wilson, two miles south, and friend White, one mile north, had black drones. My early queens were mated purely, but later in the season, five-sixths are hybrids, while friend Wilson's are every one pure Italians, and quite a portion of friend White's; isn't that a plain case of an effort of nature to prevent in-and-in breeding?

M. A. GILL.

Viola, Richland Co., Wis., Sept. 5, 1881.

My attention was called to an article in my last number of GLEANINGS, headed "Bee-caves in Texas." As you desire to know something more in regard to the same, I thought I would write these few lines, that you may see that there may be some truth in that "big yarn" that friend Hutchinson writes about.

I am not acquainted with that particular locality spoken of in the *Youth's Companion*, but I have scouted considerably in the same range of mountains, and have often been told of large bee-caves in such and such parts of the mountains; but my business was of such a nature that I could not take a "hunt," but I know that it is so, for I have particular friends who have been to many bee-caves; in fact, friend Root, some of these old Western Texas settlers could tell you truthful bee yarns that would lay that of the *Youth's Companion* very much in the shade; in fact, so well is it known, that I am continually being advised to start my bee business in the mountains, where I could get all the bees and honey I want, free. There are considerable drawbacks to starting a business there, that will be overcome in the course of time when the country is more settled up. By the bye, let me tell you another thing in regard to bees in Texas. It used to be a very common thing to find bees building in the tall grasses and bushes, and I presume is so yet it the thinly settled parts of the State. At some future time I would like to send you a few bee-cave yarns if you think they would be of any interest to your readers.

THOS. BALCOMB.

Luling, Caldwell Co., Tex., Sept. 26, 1881.

Many thanks, friend B., and I would be glad to have the "yarns" sent along, if you will only be particular and let us all know just how much of it is "yarn," and how much "real cloth." Here is something from another friend on the same subject:—

I see in my last number of your GLEANINGS a bee-cave story that you seem to doubt. I can say to you that such things as bee-caves are in existence. Two hundred miles west of this place, bee-caves are very common, and a large number of bees inhabit the caves. The "bear" part of the story I do not believe, nor the water being sweet for miles below the cave. Hearing the bees a mile from the cave is not unreasonable. You must remember, the air is much purer in Western Texas than where you live, and noise can be heard at a greater distance.

My bees are doing very well, except one hive, which some one robbed a few nights past. The damage was about two gallons of honey. I don't know whether they got the queen or not, but think they have.

J. W. TRAYLOR.

Mt. Joy, Delta Co., Texas., Sept. 25, 1881.

QUEENS THAT WILL STING—ALSO A WORD ABOUT BEE-CAVES.

I have been keeping bees over 15 years, and have had many queens in my hand, but you may guess I sent one whirling the other day. I had her in my hand waiting for the return of my son with a queen-cage. She crawled up on my wrist, and plunged her dagger in. I slung her loose in a hurry. Did it hurt? You "bet a reckon" it hurt as bad as a sting from a worker; but the sting did not remain in the flesh, and as an experiment I took a hybrid Holy-Land queen (virgin) and tormented her until she would sting my fingers.

Bees are not doing as well as they did last fall; mine, however, are busy on red elm, cuckle-burr, and fall cotton-blooms. I have received several letters asking about Texas as a bee State. I will say, some portions are very good, bees often making 300 lbs. of comb honey per colony. Eastern Texas is the best; Western and South-Western are good.

I guess that description of the caves you published, see p. 436, Sept. No., 1881, of GLEANINGS, was somewhat magnified. Come out and I will show you the caves in Bosque County. B. F. CARROLL.

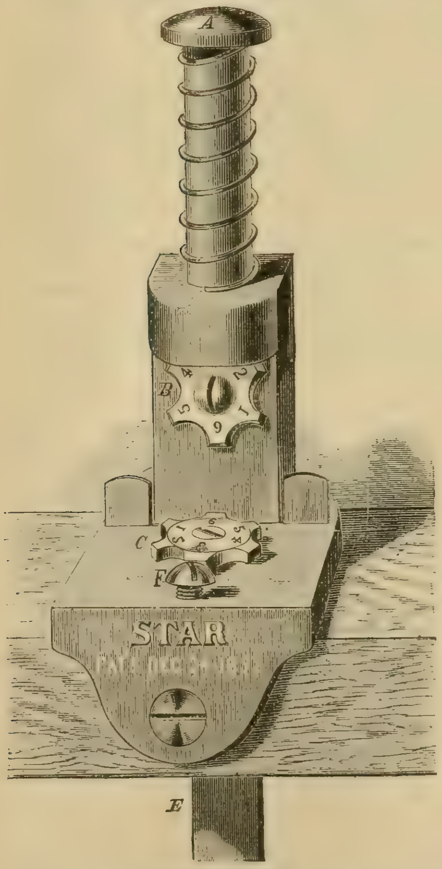
Dresden, Navarro Co., Texas, Sept., 1881.

A NEW SAW-SET.

ALSO SOME VALUABLE HINTS ABOUT SETTING SAWS.

I PRESUME there are almost as many different opinions in regard to the way of setting saws as there are machines in the market for doing it. The one shown below has received the preference by the great saw-men, Henry Disston & Sons, of Philadelphia. We have sold them for the past year, but as some of our customers want a little instruction in their use, we give the cut and explanation, from Disston's circular: —

STAR SAW-SET FOR HAND, BACK, BAND, WEB, WOOD AND SMALL CIRCULAR SAWS, NOT THICKER THAN 18 GAUGE.



STAR SAW-SET.

Prominent among the advantages claimed for this set is, that it can be operated wholly by the foot by means of a treadle, thus leaving the hands free to guide the saw.

A is the plunger, which is operated by a treadle attached to *E*, under the machine; *B*, the hammer, or striking part; *C*, the anvil; *D*, the movable gauge; *F*, the screw to regulate the amount of set.

The striking part, and the anvil, or portion which receives the blow, are star-shaped, and similar in construction. The points are all of different sizes, and are numbered from 1 to 6, and are designed to set different-sized teeth.

It will strike a blow as sharp and effective as though done by a hammer, and is the most useful and complete saw-set that has ever been offered to the trade. If the saw is *hard*, several blows should be given in setting it. Raise the back of the saw from the guide-screw *F* when the first blow is given, and gradually lower it with each blow until the process is complete. Thus many a good saw may be saved from utter ruin. A trial will suffice. Be sure to clean the saw teeth before setting.

Messrs. Disston & Sons also give us the following additional directions:—

DIRECTIONS FOR USING THE STAR SAW-SET.

First bore a hole through the bench, for the lower end of plunger to pass through; then fasten the set to the bench, as shown in the cut. The piece fastened by the screw *F* over the lower set is only to be used when setting narrow saws, to prevent them from tilting. The points of star-shaped pieces are numbered from one to six, and are designed to set different sizes of teeth. With this set a blow may be struck as sharp and effective as if done by a hammer; if the saw is *hard*, several blows should be given in setting it. In setting, raise the back of the saw from the screw *F*, when the first blow is given, and gradually lower it with each blow, until the setting is complete. The set can be used with or without treadle, as a light tap on the top of plunger is sufficient to set the teeth of saws eighteen gauge in thickness. By using the treadle, you have both hands free to guide the saw. The treadle is not furnished by us, but can be attached by any one, passing a rope or wire through the eye in the lower end of plunger, and fastening to a strip of board reaching within three inches of the floor, the other end lying loose on the floor. As in the other case, give the treadle a sharp tap with the foot. Never set by pressure. HENRY DISSTON & SONS.

Philadelphia, Pa., Sept. 27, 1881.

Where many circular saws are to be set, we have found it convenient to fix a pin in the bench, just in front of the set, for the saw to turn on. Put it over this pin, and turn it so as to set every other tooth. Now take it off the pin, turn it over, and set the teeth omitted before. If the pin has a bolt through it, with a thumb-nut on top, you can, with washers, set the saw at any height you wish, and thus insure an exact equality in the set of each tooth. To have it adjustable for saws of different sizes, the pin should be set in a sliding block, let into the bench. The slide is to have a thumb-nut, to fasten it at any precise spot. Well, after you have set your pin at the right distance, and put on washers enough to raise the saw to the proper height, you can set a circular saw so quickly it will almost astonish you.

We can furnish above set for 75c; by mail 30c more.

Heads of Grain,

From Different Fields.

CAGING VIRGIN QUEENS.

Did you ever try keeping virgin queens caged until they were 4 or 5 days old, and then succeed in introducing them? If so, in what way, and with what success? I have tried something over two dozen, and lost only one. Two of them were laying in three days after introducing. They were put in the hive in the old cell.

W. S. CAUTHEN.

Pleasant Hill, S. C., July 28, 1881.

We have introduced virgin queens when a day or two old, but it was a long job. We lost a much larger per cent than you mention, and some of them did not lay until they were ten days old. It was a very difficult thing to get the bees to accept them, and, altogether, we decided it did not pay. Introducing in queen-cells has often been suggested and tried, but I am inclined to think it makes little difference how the queen comes into the hive, if her scent, age, etc., are acceptable to the bees.

A STRING OF QUERIES IN REGARD TO PREPARING BEES FOR WINTER, ETC.

I like GLEANINGS very much, and have been much benefited by its contents from time to time. I like this comparison of ideas. I wish you to reply to the following:—

Much is said about making passages through combs for winter, to aid the comfort and prosperity of the bees; also to let them have time, undisturbed, sufficient to allow the pets to *wax up* thoroughly before cold weather closes in. Now, is this passageway and waxing necessary in cellar wintering, where no frost enters the hive? I can not see that it is.

The winter passages in the combs are not as necessary for wintering in cellars, I presume, but it is without doubt an advantage to the queen.

Again: If the *waxing* is necessary, why leave an open space over brood-frames for upward ventilation, as some argue necessary to best good of bees?

The waxing up is simply allowing bees to do as they usually do, and is all right without any particular precaution, unless with artificial or small late swarms that have not had pasturage sufficient to allow them to get into winter trim properly. I think this waxing up important, even if the bees do have a vacant space above the frames, for it makes quite a protection against cold drafts of air right through the cluster.

Do you consider any covering over brood-frames better in this latitude (i. e., duck or enamel cloth), than the honey-board?

I am not sure that any covering is better than honey-boards for winter; but the enameled sheets are vastly more convenient for summer use, especially where hives are to be opened often, as in queen-rearing.

I winter in my cellar, and wish to be able to add a little warmth occasionally. Will a kerosene-oil stove be suitable? We never have used the stove, and I am not certain about any odor arising.

I do not think I would risk a kerosene-oil stove, on account of danger of its injuring the purity and sweetness of the air.

In ventilating a cellar by pipes, one long, reaching to the bottom, and the other a short pipe, is it not as well to place both on the same side of the cellar?

I would have the pipes at opposite sides, to have the ventilation more equal throughout the whole room.

Will bees winter as quietly in a cellar with a small amount of vegetables as without?

I do not think a few vegetables would make any sensible difference.

Can a nucleus, size of ½ a medium colony, readily winter in cellar, if a sufficient amount of honey is stored?

A nucleus will winter almost as well as a full colony, if every thing is well in proper proportion, well waxed up, etc.

Are the bees sensible of the approach of any one while in the cellar, unless the hive is touched?

I do not think the bees are disturbed unless the hive is touched, but the drafts of air, caused by moving about in their depository, might arouse them from their winter's nap. I think it is L. C. Root who advises having the hives supported entirely from the ground, and but a few on a bench or platform, that in moving one hive you need not disturb many others.

I have queried whether they were so sensitive or not, as to be moved by the disturbance in the atmosphere, caused by a person's walking; also if they were accustomed to hear any noise made.

My impressions are, they do not *hear* quickly, if at all, but are *extremely* sensitive to touch and smell. Are they not also dull in sight, especially so unless the object is directly in front?

These are what I am desirous of knowing. If not too much trouble, please reply in Nov. No.

W. WAKEFIELD.

St. Paul, Minn., Sept. 5, 1881.

I think you are right, in the main, in regard to their sense of touch, smell, and sight.

HOUSEHOLD QUEENS, AND BEE-HIVE QUEENS, ETC.

I have felt (after having GLEANINGS for almost three years) on reading the last two numbers of your paper, a sort of inspiration to write a letter for the A B C column, or else it is a craving desire to see my name in print, as I am now 41 years old, and never even wrote a paragraph for a paper, and I am an old *bachelor* at that. My name is Butler, and while reading the August No. I could not but mentally wish that my name was Thomas, or had his mishap, if it would only bring me a wife as it did him, provided "she" was a lover of the bees, and there was a prospect of her loving me just a little. Now, friend Root, I am obliged to confess my letter begins to look as though I were trying to do (what I have often thought some of my A B C brothers were doing) a little cheap advertising. However this may be, if, among your lady readers, any of them should read this——

And now, teacher, please answer a new scholar a few questions. I have a queen two years old, a choice one that has for two years raised nothing but distinctly marked three-banded worker bees, but whose bees now look like poor hybrids. I have raised almost all my queens from her for the past two seasons, and all but two (and they very doubtful), have produced plainly marked hybrids. Does it not seem, if she were pure, with a few black bees a mile distant at least, a part should bring me purely marked workers?

Are Cyprian and Palestine bees equal to Italians in keeping out moths? T. R. Butler.

Alma City, Waseca Co., Minn., Sept. 5, 1881.

Why, friend B., there is no sort of need of falling out of a tree and getting stung as friend Thomas did, nor advertising in your bee journal, either, in order that you may find some nice genteel little woman who would be glad to help you keep bees and—house too! There are plenty of exactly the right kind, right in your own neighborhood, without any sort of a doubt. Either you are too faint-hearted, or else you are too particular. In either case, you must get right over it. If the woman you should get doesn't prove to be exactly perfection, it is your business, with your broad shoulders, to stand between her and the world, and by kindness and love correct the deficiencies exactly as she will correct yours. It is a bad idea to get into your head, that there are better people a thousand miles away, than there are right in your neighborhood.

We have been assisting the friends largely in getting household conveniences, it is true, friend B.; but you did not suppose we meant to include in the list household queens, did you?

If they don't know about bees, it will be all the more interesting to you to have the pleasure of teaching them. Fix up, and start out this very night; and when you are happier in a home of your own than you ever dreamed of being before, write and tell us about it.

I have never met just such a case as you mention with the bees, and do not know how to explain it, unless the queen was one of Doolittle's kind; a hybrid that produced three-banded workers.

I believe the Cyps and Holy-Lands are fully up to any Italians, to keep out the moth.

BEES AND GRAPES, AGAIN.

What is the price of the cheapest wire cloth you have that will confine bees to the hive? Do you think, with the thermometer at 75 or 80°, bees could be moved in a spring wagon 5 or 6 miles without melting or breaking down the combs in brood-chamber? Each colony contains 3 or 4 sheets of fdn. (not wired), but they were in the center, and have not much honey in them now; other combs old and tough. It seems a great undertaking to move 100 swarms, but I can not have them injure the grapes this year as they did last. I should be glad of any suggestion that occurs to you. I think there are more than 100 acres of grapes within their range.

Brocton, N. Y., Sept. 2, 1881. M. Simons.

Why, my friend, is it really a fact, that your bees have been meddling with the grapes, to the extent that you are thinking of moving 100 colonies? If so, it is a pretty fair evidence that bees do really, at least sometimes, prove a pest to grape-growers. There will be no trouble at all in moving them, providing those new combs made from fdn. are fastened at the bottoms and sides. If not, and such is often the case, where they are fastened to the comb-guide and no more, they will often get to swinging when the hive is moved, and break off. If moved during very hot weather, they must have abundant ventilation, as I have explained in the A B C; but I trust ere this you have had a flow of honey, or something providential has rendered it unnecessary for you to undertake such a task.

RATHER DISHEARTENING.

One of my neighbors sent to the city of New York for an imported queen — has received three; the first came dead; the second produced hybrid workers and black queens; the third can't hold on to the combs—an old worn-out queen, I think. I have had about the same kind of success in ordering queens.

Harvey P. Farrington.

Mandobi, Buffalo Co., Wis., Aug. 15, 1881.

Gently, friend F. The imported-queen business is full of disappointments, both to the buyer and seller. After the long trip they have to make, it is not very unusual for them to come through dead. From your statement, I infer you received another promptly, and I am a little afraid you pronounced her hybrid when she was a pure queen, judging solely from your own statement. The daughters of many of our imported queens would be pronounced black, by one not acquainted with them; but they will produce nice yellow bees, in spite of their color. Are not the workers you pronounce hybrids gentle to handle and very industrious? See if you do not find them to stand the test laid down in our A B C. The last one being feeble, was also occasioned, probably, from her long trip. It is a hard thing to be obliged to bear the loss of an imported queen; and to be censured when one is doing the best he can, makes it still harder. Shall we not all try to cultivate a spirit of patience and forbearance in these matters?

COMPARATIVE VALUE OF SUGAR AND HONEY FOR FEEDING.

You have wintered bees on sugar, and now I should like to know how many pounds of coffee A sugar, made into a syrup, a good strong colony of bees ought to have, say the 1st of October, provided they had *no* honey for winter stores. What is the comparative value of sugar and honey as a food for bees? W. Z. Hutchinson.

Rogersville, Mich., Sept. 9, 1881.

The term "good strong colony" is rather an indefinite one, friend H. The colony of ours that gathered 13½ lbs. in a day weighed 11¾ lbs., but we would call 5 lbs. of bees a good strong colony. In our experiments in shipping bees we thought a pound of bees would consume a pound of sugar in about 15 days, if I am correct. Well, bees in a state of rest, as in their hives in winter, should not consume over half that amount — say a pound of stores a month for each pound of bees. This would give 30 lbs. for each 5-lb. colony, 6 months. I do not think, in practice, it will equal more than half that, even for stocks wintered outdoors. Where they are so well protected that they assume their semi-dormant condition, the amount is still less. I should think, from the experience I have had, that a pound of granulated sugar made into syrup would be worth as much as 1½ lbs. of the best honey, to feed. In regard to the quantity, we should remember that too much is always safer than not enough.

ROOM WANTED IN THE SMILERY.

If you have any idea of putting me in Blasted Hopes, after my writing as I did in September No., that "very likely my bees would have to be fed in winter," I will now say, "Don't." We have had several nice showers of rain since that date, and it is surprising to see how vegetation of all kinds is growing and blooming. Should frost hold off ten days or two weeks yet, I may want space in the Smilery. I feel satisfied now that all will be in good condition, and go into winter with plenty of honey. It is surprising to see the amount of brood they have on hand. They will not die this winter, if young bees have any thing to do with successful wintering.

UPWARD VENTILATION.

After reading Jerome Wiltse's article on upward ventilation, I wish to say that I once transferred a colony of bees for a neighbor, that wintered in an old Buckeye hive, the door of which was left half open all winter. I think it was the winter of 1877-'8. However, the weather was *very cold* all through, yet that colony wintered well, and was covered with bees the next spring when I transferred them. What kind of ventilation would you call that? That they were thus exposed *all winter*, I know to be a fact, as they had comb built from the fronts of the frames to the door, which could not be shut. In conversation the other day with a bee-keeper from an adjoining town, he stated that, in preparing his bees last fall, he accidentally left one colony with only the enameled cloth over the frames, and this spring it was as good a colony as he had. Wonder if we hadn't better "about-face" and take the other extreme awhile. It seems that, after all the fun we "smarties" poke at the "old fogies," they are there about the time *we* arrive. Joseph M. Brooks.

Columbus, Ind., Oct. 8, 1881.

Friend B., I don't believe I would apply for a place in the Smilery if I were you, before next spring, say the first of May for instance.—I am not surprised that the colony wintered with an opening in the side of the hive, nor that the one with only the enameled sheet did also; and I think if there had been a small hole in the sheet right over the cluster, it would still have done well. A real powerful colony will winter without any thing over them, not even section boxes; but if they are not real strong, they will die off every severe freeze, until *all* are gone. I have tried it, some of you may remember. At such times, even a slight covering seems to be very important. Now, if a small opening is left in this slight covering, this opening will be so full of bees, even during severe weather, that no very great amount of air can get through it, and it begins to look to me as if such an opening, or openings, are about what they need.

STILL HOPEFUL.

I ordered a queen of you a few days since, which came to hand all right and promptly. She is now laying, and, to all appearances, will make a successful house-keeper—domestic in her habits, industrious, economical, and, above all, good disposition. I have run down several times since I have kept bees, to one and two, and once all went; but my hopes have never been entirely blasted. Last fall I had 23 colonies; this spring I had only two; but I never felt more determined in my life than I have this season. From those two swarms, I have had 7, and expect, before Oct. 1st, to have two more, all in good condition for wintering; and if I lose all next winter, I will buy a swarm and commence again. Nothing like pluck and a happy disposition in bee-keeping. I know now it was all my fault that I lost so many last winter. They were all strong, but I neglected them until cold weather came on so suddenly I could not make up for my procrastination; but that was only one of many losses I have learned and appropriated to myself. W. H. Sedgwick.

Granville, O., Aug. 20, 1881.

WHAT ONE SWARM DID IN COLORADO.

I bought one colony of pure Italians this spring, with clipped queen (got them in April), and May 25th they swarmed first, and June 2d they swarmed again, both being fine strong swarms. June 4th they swarmed again, that, of course, being a light swarm. I have taken 50 lbs. of fine honey from the first, and will get about 25 more. The second will have about 16 lbs. in sections, and the third have the 10 frames full, but will make none in sections. I have taken 14 lbs. from the old hive, and they have the 10 frames full for winter. The honey is made principally from Rocky-Mountain bee-plant and wild sunflower. The bee-plant is very plenty, growing everywhere wild, and will average four feet in height, with some specimens six feet high, and blooms from May till September. S. H. Kelley.

Berthoud, Larimer Co., Col., Oct., 1881.

SMALL QUEEN-CAGES, VERSUS LARGE.

The queen came all right, lively as a cricket; shipped on the 8th, and arrived here on the 11th. Two Peet cages put together is a pretty good idea for shipping long distances, but not as good as the cages used by you last year. A shipping-cage should be small, so that the queen would be tossed but a short distance from one side to the other. The concussion then is not great enough to injure the queen when the mail-bags are being tossed about. Well, friend Root, what do you think of my improvement on the Langstroth brood-frames, also for the extractor? It may be old, but new to me. Simply use 3 end-bars instead of two; the center one holds the combs firmly, and they will not break in extracting, neither will fdn. sag so badly, and is not in the way of the queen at all. J. S. Tadlock.

Kingsbury, Texas, Sept. 17, 1881.

I have for some time been thinking of your point in regard to queen-cages, friend T., for it is a fact, that large cages do not, many times, seem to do as well as the small ones, and I am inclined to think it is for the reason you state.—Your middle piece in the frame is a very old idea, and the only objection is, I believe, that it makes a blank space right in the heart of the brood-nest.

IMPORTANCE OF UPWARD VENTILATION, AGAIN.

I will now hand in my report for this season. Had 3 colonies of blacks left in the spring; increased to 10 by natural and artificial swarming; have taken so far about 125 lbs. nice comb honey. I had 1 colony of blacks that was shipped to me 25 miles by freight last winter, when it was bitter cold. They were in a tall box hive; in the spring I transferred them to the L. hive, and took 20 lbs. of honey. They swarmed in about two weeks. In 6 days I divided them into 3 more, giving to each a ripe queen-cell. This I did on Monday. The next Friday they cast a second swarm, notwithstanding the dividing. I returned this swarm and gave them a comb containing eggs, and they swarmed no more. Now, I tried last winter to winter 12 colonies in L. hives, and 2 in box hives; one was the above colony; the other I bought at a sale for one dollar, and carried them home on my shoulder more than a mile last November. They were weak in numbers, and also in stores; but both box hives had an empty space above the brood-chamber *for* a surplus box. Both box hives came through the severe winter all right; but 11 of the 12 in L. hives went "where the woodbine twineth;" 10 of those had 7 inches of chaff on top, and 9 had one foot of straw packed all around, except in front; box hives had no protection. This has been a noble season with us. I believe that tons of honey went to waste in the fore part of the season for want of bees to gather it. But the drought cut short the buckwheat and golden rod.

North Robinson, O., Oct. 3, 1881. J. H. EBY.

I believe Doolittle is right when he says that some queens produce all three-banded workers, whether said queens mate with black or Italian drones. Three years ago I purchased a queen of H. A. Burch. It was late in the season, so I raised only two queens from her, and both of them produced all three-banded workers, and there were no Italian drones within 12 miles. I raised 50 queens the next season; they all produced three-banded workers. But I had plenty of Italian drones then. Mr. Burch has some very nice Italians now. I purchased a queen from him this fall. She proved to be tiptop. I have got 86 colonies. They did first rate in the fore part of the season, but the latter part was too dry. S. M. NEWMAN.

Glenn, Allegan Co., Mich., Sept. 1, 1881.

ALLEY'S STOCK OF ITALIANS.

I see by Sept. No. of GLEANINGS, Mr. O. E. Coon wishes to know where he can get Italian queens that will produce yellow drones. Mr. Coon can get queens of Henry Alley, Wenham, Mass., that will produce *yellow drones* and yellow bees with three bands; no two-banded bees among them, and the worker bees *are* workers, as good as the best. They are very docile (can be handled without bee-veil), and are very hardy. I have had Italian queens from Mr. Alley since 1878, and have never known a queen to produce a dark-colored drone, and the worker bees need not be put on a window to show their 3 bands. They will show them when empty.

Oakdale, Wis., Sept. 7, 1881. C. J. ALDEN.

The wrapper on my August GLEANINGS stated that the time for which I had paid expired with this number. How short the years appear! It is said an aged spinster complained that they didn't make looking-glasses as good as they used to, and it appears to me the years are not as long as those of former times. Well, I inclose another dollar, with the hope that the coming year, if short, may be a happy one.

Bees have not done remarkably well in this section this season. The flow of honey from locust and basswood was large, but the white clover, though abundant, yielded little or nothing. One time last month neighbor Sherwood and I noticed our bees were working vigorously on something to the S. E. of us, and were told by a man that he had seen bees in immense numbers on a field of red clover at the foot of the mountain 1¼ miles from us.

A HANDY SCRAPER.

I have just found a section of a mowing-machine knife a very handy thing for cleaning hives, frames, and sections. After these sections are worn to a point they are worthless on the machine, and are just right for our work, with a little grinding to straighten the edges. Turn one edge down to scrape toward you, and the other to scrape from you, and hang it up by one of the holes when your work is done. The dull edge is handy for cleaning the table or bench on which you work. Try one, and if you like it, recommend them to the boys.

JAS. E. DEAN.

Fishkill, Dutchers Co., Y. Y., Aug. 19, 1881.

WATER FOR BEES; A REQUEST.

In the Sept. No., under the head of "The Experience of a Novice in Bee Culture," I find an article of more than usual interest to me. In his closing remarks he says, "If any one should wish to have my method in giving water to bees in winter, and how I have managed to get 275 lbs. of honey in sections, I will give it in GLEANINGS, if the editor will give room." Give room, give room, Mr. Editor; we want to know it all, for water is as cheap a bee feed as grape sugar or any other sugar.

J. PATTERSON WATT.

Duck Creek, Mercer Co., Ill., Sept. 5, 1881.

BUCKWHEAT MAKING BEES STING.

I see no letter from here in GLEANINGS. Tell your A B C child it was buckwheat that made the bees sting the horses and men. They ought to have used the whip, if there was no other way to get them away from there. Then, fighting the bees called the others there, and made it ten times worse. Bees have done the best here this year I ever knew them to. Bees almost all died here last year. There were about 200 swarms in this town that I know of; 12 were left this spring. Bees pay me the best of any thing. I have 11 now; 8 last fall; lost 3; sold 1 this spring; left 4. F. P. DATTON.

Cobmoosa, Oceana Co., Mich., Sept. 3, 1881.

TAXING BEES.

I send you a paper containing references to the laws of Iowa on taxation of bees. It was written by a member of the bar of the Supreme Court of Iowa. Now, you are asked, "Are bees taxable property?" You answer, like a moralist, "They ought to be." Now, what ought to be, and what *is*, do not always coincide. Better say, "Don't know," when such is the fact. The general theory is, that all property should bear its proportion of taxation. But the law does make exemptions, and the question comes, What is exempt? I have a lot of Clydesdale colts, valued at $100 each. They are exempt. It may be wrong, but I am not a law-maker, and can not alter facts. Is it not wiser to exempt bees than colts? How can an ordinary assessor tell the value of a swarm of bees on first day of Jan., the day in Iowa for setting values? JESSE OREN.

La Porte City, Black Hawk Co., Ia., Sept. 8, 1881.

Thanks, friend O. Perhaps I should have said that it seemed to *me* bees ought to be taxed. My only reason for saying this was, that I could see no great difference between the man who raises wool and mutton for a living, and the one who raises bees and honey. Tell the assessor what they are worth yourself; what one of your neighbors who keeps bees would give for them, would probably be something near their value for taxation. I believe that in some States a man's land is exempt, if he plants a certain number of forest-trees on it. The government exempts him, because they wish to encourage any movement that is for the public good. It may be so with the colts you mention. But is it so with those who keep bees, on the average? I know of some places where the community think quite the other way. I do not believe I could be happy with money that belonged to some one else, and on the same principle I do not want money that justly belongs to the government. If my neighbor was taxed who had a thousand dollars invested in sheep, and I who had the same amount invested in bees was not, I should feel a little ashamed of myself, unless some good reason were given for making the distinction. I have read the article you sent, friend O., and I thank you for it; but still I do not see why bees should be exempt.

USING "C" COFFEE SUGAR INSTEAD OF "A."

I thought I would let you know how my bees have made it this summer. I don't think I ever saw bees do so well. I have just taken off 30 lbs. of nice honey, and have plenty in the hive to winter plenty of bees. The queen that I got with the bees, June 23d, has kept 8 frames filled with brood all the season.

I bought a hive of black bees the other day of a neighbor, that he got out of a tree. They are in poor condition. I think there seems to be enough bees. They have but little honey, and but two frames of brood, and not very full at that. I am feeding them on the best C sugar I can get. If you think I can get them through the winter, I want a tested queen. They didn't cost me much — $1.30, hive and all. There are bees enough to cover 7 frames.
D. C. STRINGER.

Clinton Falls, Putnam Co., Ind., Sept. 21, 1881.

Although your C sugar may answer all right, friend S., especially if the winter should be a mild one, I do not believe I would keep on feeding it. I once fed up a colony that was taken from the woods, on yellow sugar. They built up nicely, and came through the winter well, but they died of dysentery as soon as they got to rearing brood, largely in March.

WIREWEED, ETC.

The flow of honey from fruit-bloom was very good, and several small early honey-plants did well, which lasted until poplar, or whitewood, came in. This was very heavy, and gave us a good yield; but when this was gone, *all* was gone. White-clover bloom was plentiful, but was dried up by the sun as soon as it came out, and so it failed to give us any surplus. Sumac failed too; linden did not do much better; in fact, all the main honey-producing plants have yielded up to the present time, with the exception of poplar; but it is very seasonable now; and as there are several fall honey-plants here, may be they will gather honey enough yet to winter. Wireweed is our only hope. This is a weed which grows from 2 to 3 feet in height. In one of our neighbor's pasture fields last fall it was white as a buckwheat field. It begins to bloom about the middle of September, and continues to bloom, if I am not mistaken, very near to December. Frost does not seem to affect it in the least. I have seen bees on this plant after a tolerably hard freeze. I think this plant will bloom and bear honey as long as nature intended, independent of cold weather.
J. F. RUNNION.

Spencer, Roane Co., W. Va., Sept. 27, 1881.

I do not find we have had any such plant as wireweed reported. Is it not a variety of the fall asters, friend S.?

LADY-BIRDS ON THE SPIDER PLANT.

These are what I suppose you call moth miller, and one of the friends calls humming-birds. They come in such numbers to my Spider plant, about half an acre, that it is of no value whatever to the bees, as the pests come at night in regular swarms, and lap every drop. They make a noise that can be heard some distance. They do not bother the Simpsons. Now for the report: Commenced the season with 8 strong and 4 weak swarms; transferred them to Simplicities; increased to 33; lost 5, absconded, which was caused by my having to farm the place and tend the bees, which are in excellent condition for winter. About 600 lbs. surplus; 200 lbs. extracted, rest comb. Extracted, 9c per lb.; comb, 14. I lost at least 100 lbs. by not having hive room enough, but I did all I could, which was all about a week behind hand.
A. OSBUN.

Spring Bluff, Adams Co., Wis., Sept. 24, 1881.

WHAT TWO HIVES OF BEES, BOUGHT IN JUNE, DID.

The 9th day of last June I purchased of a neighbor two hives of bees. The 12th, one of them cast a swarm; the 13th, the other cast a swarm. I put each one in a Langstroth hive. Ten days after, they both swarmed again. I put them in hives full of comb. On the two first swarms that came off, I put 20 frames, holding 2 lbs. each, on each hive. The 9th of July I took off 40 lbs. from each hive, the nicest clover honey I ever saw. The 29th of August I took from one hive 30 lbs., and from the other 20 lbs. of buckwheat honey, making, in all, 130 lbs. from the two hives, of surplus honey. The second swarms have filled their hives.
H. L. WHEAT.

Croton, Delaware Co., N. Y., Aug. 29, 1881.

THE QUEEN THAT FLEW 27 MILES (?) TO GET HOME.

A few weeks since, I took a lot of queens and carried them to Ellis County, about 27 miles away, and introduced them into Major H. H. High's apiary, and, while introducing, one queen flew away and did not return, and I thought her gone for ever; but imagine my surprise to find her (I reckon) in her nucleus on my arrival at home. As it was only a two-frame nucleus, it could hardly be possible that two queens were in it, and I am certain that only one cell was given it. Do you think it possible the queen returned? A few days since, I opened one of my best colonies to get a frame of brood, and found the queen in a ball of her own bees. The queen is very prolific, keeping her hive full, and is only one year old; but she had somewhat suspended operations on account of drought, and the bees had filled the brood-nest full of honey. I extracted three central combs, smoked the bees from off the queen, and in one week she had the three frames full, and two others partly filled. Do you think they intended to kill their queen, or were they hugging her for fun?

B. F. CARROLL.

Dresden, Navarro Co., Texas, Sept., 1881.

No, I do not think it possible at all for a queen to fly 27 miles. A queen from some other hive must have flown in by accident when you were away. I was going to say, in your latter case, that the bees balled the queen because they were dissatisfied with her not laying, and perhaps that was it still, even if she did lay three frames full when she got at it. Colonies not very strong often ball their queens when the pasturage fails, or during a drought in the fall.

WELL DONE FOR AN A B C SCHOLAR.

It seems to be in order, from what I notice in all bee journals, to make reports of the season. As I am one of your A B C scholars, I will make my report to you.

I commenced the season with two stands, one Italian and one hybrid. I have taken 130 lbs. of section honey, and 12 lbs. extracted; have increased to 7, which are all in first-rate condition for winter; and, by the way, all my young queens are purely mated. I had my ups and downs, like many others, for my Italian stock, which cost me three swarms, turned out equivalent to being queenless. They had a fine-looking young queen, but she would not lay an egg. After a lapse of some two weeks I made a thorough examination, and found that she was slightly defective in one wing, so that she could not fly. Of course, I pinched her head off and introduced a laying queen. The stock got very much reduced in numbers, but has fully recovered now.

F. C. GASTINGER.

Kenton, Hardin Co., O., Sept. 26, 1881.

NOT VERY BAD FOR A SMALL VENTURE.

I bought 2 nuclei of Italian bees of Dr. J. P. H. Brown, in the spring of 1880, and they were the only Italian bees in the township, and the only bees that wintered, according to our assessor. This spring I bought 6 swarms of bees of Mr. E. H. Thomas. Bees, express, and money order, were $45.92; sold honey from them this summer to the amount of $46.13, and got 4 good swarms, besides one going to the woods. They are in two-story Simplicity hives. As I took honey only once, the hives are full of sealed honey. Now, if I had had the experience last spring that I have now, I think I could have done much better.

CLEMENT KINTNER.

Carrollton, Carroll Co., O., Sept. 11, 1881.

WHY THIN HONEY DOES NOT SOUR IN THE HIVE, ETC.

I have quite a lot of feed which has become sour. I suppose it will not do to feed out now; but would it do after scalding? It was kept in a warm place, which, I suppose, is the reason it soured; but if this is so, does it not also become sour in the hives?

CHARLES O. MELOON.

Portsmouth, N. H., Aug. 1, 1881.

I would not risk any thing of the kind for winter food, friend M., but it will be all right to feed in the spring, between fruit-blossoms and clover, and it will pay well to feed then too. Scalding will improve it; but still, I would not risk it for winter. Thin feed that would sour over night, almost, will not sour at all if put in the hive by a good swarm of bees. If I am correct, this matter is not fully explained; but certain it is, that after they have got it under their supervision, scattered about in the combs, a little in each cell, it slowly evaporates into thick honey or syrup, without any souring. If anybody can tell why, let him stand up and do so.

INFORMATION WANTED BY AN A B C SCHOLAR.

Does a tested Italian queen produce one and two banded bees?

An "orthodox" tested queen never produces a single one or two banded bee.

Do Italian bees require better care than blacks through winter?

No *better* care; but they may in some respects require a little *different* care.

Can I be as successful in raising pure queens from the tested daughter as I can from the imported mother?

I think you can be just as successful, but there may be a little more vigor, the nearer we get to the original imported stock. Besides, if Doolittle's position be true, that a hybrid queen *may* produce all three-banded bees, we can not be positive we have pure Italians, unless we have an imported queen. Some of the brethren contend we can not even then.

UPWARD VENTILATION.

Last winter I lost nearly all of my bees. Whether they smothered or froze, I am unable to say. I packed them away nicely last fall, with hay, on their summer stand, leaving the entrance free, which was ⅜x6 in. With no other ventilation, is this enough or not? If not, should it be given at the bottom or top?

If you had nothing but hay over the frames, or even a covering of coarse bagging under the hay, not too much covered with propolis, I think it will be ventilation enough; but if you have a honey-board, or any thing equivalent, it should be moved back about ¼ or ⅜ inches, just so that mice can by no possibility get in. Neighbor Rice, who winters quite successfully, and sells me many bees, says he uses one thickness of clean old carpeting. He removes the gummed pieces used in the summer time, just as he puts in the cellar, and puts on a clean one. He says one thickness seems to do better than two or more; for with the latter, the bees get damp. I am quite sure many of us have covered the bees too closely.

I must tell you something about my Italians. I began this spring with 3 colonies of bees — two of blacks and one Italian. The latter I increased to 4 and got 50 lbs. of honey. The two blacks I increased to 4, and got no honey. I raised 4 queens and Italianized my blacks. My first swarm of Italians came out on the 28th of May. The next day they carried in 9 lbs. of honey; or, in other words, the hive increased in weight 9 lbs. in one day, and on the 28th of June it threw off a very large swarm. The other swarms were made by dividing. I prevented my blacks from raising drones by cutting out the cells. After all my trouble, some of my queens produced hybrids. I have seen, this summer, hundreds of my Italians on red clover, but my blacks appeared to have no business with it.

A. C. WILLIAMSON.

New Matamoras, Wash. Co., O., Aug. 22, 1881.

FROM 9 TO 20, AND HALF A TON OF HONEY IN ONE SEASON.

Report for 1881: Began the season with 9 colonies; artificial increase, 11; wild swarm, 1; July 10th, a cast, 1; nucleus with virgin queen, one. Total, 23 colonies.

Extracted over 1000 lbs., and have left them all in good order for housekeeping till next spring. I had no trouble in introducing a Cyprian queen, but failed with a Holy-Land. She was killed in the cage by the bees from the hive. The same nucleus has since reared a queen from a cell which R. Wilkin gave me from his Holy-Land queen. Two or three of my neighbors have queens of the new breeds; and so next year we shall see how they compare with the Italians as honey-gatherers in California, which, in many points of climate and general aspect, must strongly resemble their native haunts.

My good fortune this year in increase and honey crop is largely to be credited to the situation of my apiary, a little over 3000 ft. above sea-level; pasturage extending about 1800 ft. higher up the mountain slopes, having a fine range all to myself, with an abundance of late pasturage; and having but a small number to see to, I was careful to have each colony in full strength at the beginning of the season. E. G. SOBEY.

Santa Paula, Ventura Co., Cal., Sept. 16, 1881.

CROSS BEES FROM AN IMPORTED QUEEN.

I think it about time I reported to you in regard to that imported queen. Well, she has quite a stock of young bees, rather dark ones at that, and, oh such cross ones! worse than blacks. I believe I would rather have that dollar queen I got of you a year ago last July; she raises nicer-looking bees, and I can handle them without getting stung, they are so gentle.

It has been so dry in this locality that bees hardly make a living this fall. I have about a ton of splendid comb honey on hand; have an offer of 16c per lb., think I ought to get more. Do you hear any thing against putting foundation in sections? Some of my neighbors think this honey is not as good, for it is tougher.

GETTING BEES OUT OF A BEE-TREE.

My brother found a bee-tree, about three miles from here, and wanted me to go with him to cut the tree and save the bees, if they were worth it. Sept. 17th we started, with horse and wagon, ladder, smoker, hive, etc.; got to the tree about 11 A.M. They were in a dead chestnut-tree, about 12 feet from the ground. We cut them out and succeeded in getting comb enough to fill two L. frames; got a good swarm of bees; had to stay until dark to get them into the hive; set them in the wagon, and brought them the three miles over a very rough road; set them right in my apiary of 80 strong colonies, and to-day they are a good working colony, building comb and storing honey. How's that for an A B C?

I am busy making chaff hives now, to pack my bees in for winter. I like the plan of wintering on summer stands.

I came very near forgetting to tell you something that perhaps you never heard the like of before. You say in your A B C (if I am not mistaken), that where two queens fight, one or the other comes out victorious, but they never both die. I shall beg leave to differ with you for once. On the 30th day of June, 1881, I had a very large first swarm come out of No. 23. Having a few empty combs on hand, I gave them 3, I think, July 1st. I was up early; I saw there was something wrong with my large swarm, and on examination I found two dead queens in front of the hive. July 2d they had queen-cells started, so one of these queens must have laid a few eggs in this empty comb the same night they were put in the hive. They raised a queen from one of these cells. ALBERT BRUSH.

Susquehanna Depot, Sus. Co., Pa., Sept. 29, 1881.

The disposition of the bees from imported queens varies considerably, as well as the color; and it is not unlikely that the progeny of a dollar queen may give better satisfaction, in every respect, than that of some imported queens.—I think you should get more than 16 cents this year, for nice comb honey. I would be glad to get it for that price myself. Our grocers have been paying as high as 24c here.—I should say your feat of taking the bees out of the tree was pretty good for an A B C scholar. We have no complaints now of comb honey made on foundation.

CYPRIANS; ARE THEY HARD TO HANDLE?

I see friend Hayhurst and Dadant & Son (through whom I procured my imported Cyprian queen) are "down on them." For my part, I don't want gentler bees. I have at least a dozen pure Italian colonies that are far worse to handle than my Cyprians, and I am surprised that such veterans in bee culture as the Dadants and Hayhurst should give them up after so short a trial. I can not speak with authority in regard to their honey-gathering qualities yet, but this I know: that the young queens raised from my imported queen, whether mated with Cyprian or Italian drones, are ahead of any I have ever seen in prolificness, and all are uniformly gentle to handle, if handled as bees should be. The season that opened with so much promise has about ended in the greatest drought that has visited this section for many years, and careless bee-keepers will lose the most of their bees this coming winter from starvation, or all signs fail. If I can get my young colonies fed up in time, I will pull through. The old ones are all right, having plenty of honey stored in June. E. T. FLANAGAN.

Bellville, Ill., Oct. 1, 1881.

My bees have not done very well this season; have taken out about 400 lbs. honey — 300 lbs. extracted, 100 in 1-lb. sections. I have sold it for 16⅔ cts. for extracted, 22 for comb. Best swarm gave 86 lbs. (queen I had of you June 1st, 1879;) second best, 60 lbs. Had 11 swarms in the spring; increased to 15; have doubled down to 12 now. They have not gathered much honey since the 4th of July. I had one swarm come out Aug. 10th, one the 11th, and another about the same time that went to the woods — all first swarms. There is no honey coming in, nor much in the hive. I think I have a red-clover queen. I have one swarm that has filled its hive with honey since the rest have been eating theirs up.

GUY CLARK.

Bellows Falls, Windham Co., Vt., Sept. 13, 1881.

You must not let your first swarms (nor second either for that matter) go to the woods, friend C. The loss of just those you mention has made all the difference between a loss and a gain in your season's operations probably. Hold on to your red-clover queen, and see if you can rear others from her that will do likewise.

FLOUR FEEDING IN THE FALL.

Will you be so kind as to answer me these questions? I have 4 swarms of bees, weak, and little honey in each. Can I mix a little wheat or rye flour in the sugar syrup for pollen? They need young bees, and winter food. Is the flour harmful for winter food, or can the bees separate it from the syrup, and put it alone in cells? I stimulate my bees, and it is so dry that they can get no pollen, nor have they any in the hive (the 4 swarms). H. M. MOYER.

Hill Church, Berks Co., Pa., Sept. 24, 1881.

You can build up colonies in the fall by feeding wheat or rye flour, either in candy or syrup, as I have told you in the A B C; but although I have succeeded in so raising brood, during every month in the winter, during mild winters, we have pretty good reason to think that the flour predisposes to dysentery during or after severe winters like our last. The bees have no way of separating the flour from the candy or syrup, but it is all stored in the cells together, giving the contents a milky look. In case pollen were lacking, I would, to rear bees, feed the flour in August and September, but I would be a little cautious about using it in October. However, more experiments may demonstrate that it is not necessarily deleterious.

FDN. WITHOUT WIRES, ETC.

The fdn. ordered came promptly to hand, and in good shape. The Dunham for brood-chamber was A No. 1; the thin for surplus had a good many imperfect sheets, cracked and pieces out, etc. Perhaps it is as good as you can do on such thin fdn. Let us know, through GLEANINGS, whether it is possible to make perfect sheets of the thin fdn. I used the fdn. in brood-chamber in August without wire, and it seemed to work well. Do you think we can use full sheets for new swarms of the heavy Dunham fdn. without wiring? You are very prompt in filling orders, which is no small item in pleasing customers. I came near going with the Blasted Hopers last winter and spring; final loss, 20 out of 30 swarms in fall. I bought 11 to help build up again; increased to 42, and shall have between 50 and 60 lbs. of section honey per old colony, exclusive of glass.

SHALL GLASS BE COUNTED AS HONEY?

In giving the weight of honey, is it weighed as taken from the hive? Some glass their sections for market, and others do not; some have glass on their boxes on the hive; it makes quite a difference — probably about a fifth on 5¼x6¼ sections. FAY KENNELL.

South Gates, Monroe Co., N. Y., Sept. 22, 1881.

Many reports from the heavy thick-walled fdn. seem to indicate that it may be safely used without wires, so far as sagging is concerned. Perhaps during very hot weather it might not answer so well. We prefer the wires, in any case, for convenience in handling and shipping bees. The thin fdn., made in narrow strips, need not have holes or cracks in it. When made in very hot weather, however, it is pretty difficult to avoid some tears. In shipping in cold weather, it is also much more apt to break than thicker fdn.—It has been customary, I believe, to weigh up the glass with the honey in selling, and, I suppose, in reporting in regard to the crop; but, if I am correct, since the convenient cases, with glass sides, for retailing, have been put in the market, glassed sections have rather gone out.

HOW THEY FIX ANTS IN FLORIDA, ETC.

Well, I lost the swarm I spoke of in my order; but very few of them were alive when I wrote to you, and although I had taken the precaution to set them on a stand with the legs in cans of water, one night it so happened that one of the cans got moved up to within ⅜ of an inch of the leg, and the large red, or what we call "warrior" ants, found they could reach across, and by that means took possession of the hive, and in the morning we found they had killed every bee. But, being determined not to be nonplused in that manner, I went to work and put me up a shed by setting posts firmly in the ground; size of shed was 12x4 feet; height at front, 6 feet, with a sufficient slant to shed water. I then suspended, by means of strong wires, two scantlings 2x4 inches in size, and the length of the shed on which to hold the hives, so as to clear the ground about 6 inches. On each of the suspension wires I soldered a tin cup made in the shape of the flaring part of a funnel, to hold about a quart of water; so now, with this arrangement the ants will have to climb up the posts and then down the wires, and swim the water before they can by any means reach the hive. Well, when I had got all completed, I got another swarm of neighbor F. L. Dimick, and have them on my above-described protection platform, where I think they will be free from the ants, or any other crawling insects. Our country, being all the time warm and free from frost, is much infested with insects, and in consequence we must be very vigilant to protect our bees all the year round. I expect that the winter months will be the best for gathering honey, as the bees seem to refuse to go out much in the heat of summer, except just at night and early in the morning. I think that an abundance of forage will be found here for our bees, as almost every tree and bush, and an endless variety of weeds and plants, are at all times in bloom. V. O. SPENCER.

Lake Worth, Dade Co., Fla., Aug. 18, 1881.

RAPP, OR WINTER RAPE.

Send me 4 lbs. of "rapp," or winter rape; if it will stand over winter in Wisconsin, it certainly will do well here.

A poor season for me on sandy land; no rain since the last day of May, and no honey since the 15th of June. Neighbor Davis, ten miles away, on black, sticky land, has 2500 lbs. We have had a little rain, and are looking for more; the turnip-sowing is very brisk, and seeds are in demand. M. S. KLUM.

Sherman, Grayson Co., Texas, Sept. 12, 1881.

As plants to winter over (like the seven-top turnip) seem quite desirable, I wrote our seedsman, asking him what the difference is between this and seven-top turnip, if any. His reply is below : —

In reply to your postal of the 20th Sept., we would say, winter rape is the original of the ruta-baga tribe of turnip, with a smooth leaf resembling cabbage. Seven-top turnip is rough leaf, like white turnip. The summer rape we consider more akin to the white-turnip family. A. C. KENDEL.

Cleveland, O., Sept. 24, 1881.

As it is at least something that needs developing, for bee culture, we sent for a pound, and had it nicely sown, just about the first of this month. I am in hopes it will escape the little black flea that so effectually cuts off our chance of raising the *summer* rape, in our neighborhood.

Oct. 4.—It is now coming up nicely.

YELLOW BEES FROM A BLACK QUEEN.

I have one colony I got out of the woods, and the bees show just as many yellow stripes as those you send me, and are a great deal larger. I never use smoke nor veil when I handle these, but the queen is black. Myself and a neighbor cut 13 bee-trees this year, mostly live oak; got 116 lbs. of honey out of one tree; but, about 4 gallons is the general run.

JOHN W. ROSS.

Velasco, Brazoria Co., Tex., Sept. 20, 1881.

Why, friend R., you have made quite a point. You say those bees are three-banded, large, and gentle, yet you know they are not pure, for their mother is black. This corroborates what friend Doolittle said last month; and it looks as if we really have no means of proving positively that any queen is pure. All we can do is to warrant a queen to produce nice bees, and even your black one does that. It would be just like me to raise some queens from her, to see what they would be like.

A PLEA FOR GLOVES AND VEIL.

Herewith find inclosed $—— for one pair of rubber gloves and one bee veil; and at the same time please record my solemn protest against your advice to the class, about using veils and gloves—at least, in handling Holy-Land bees. If you could see me this morning, with head enough for two men, and not enough sense for one, you would certainly repent of that advice. As for smokers, whew! I am only waiting for the bees to make me money enough to order your factory chimney with perpetual-motion attachment.

GEO. D. SHAW.

Thomasville, Thomas Co., Ga., Sept. 29, 1881.

I am very sorry for your misfortunes, friend S., and no doubt you feel badly, and are right in thinking something ought to be done; but I think you will get along much better to make your bees behave, rather than put on veil and gloves and leave them to chase everybody else all over the neighborhood, who don't happen to have such an armor. When bees get the upper hand so that they sting your hands, they are altogether out of order; and if I could not make them stop without putting on gloves, I am inclined to think I would shut the hive up and wait until some day when they were in a better mood to be "reasoned" with. Many thanks for your order all the same. I don't mean to dictate, only suggest.

BEES BALLING AND KILLING THEIR OWN QUEEN.

I had a virgin queen killed this spring by her own bees that had made the cell and hatched it—something that I did not know ever occurred. I happened along and found her in a large ball of bees on the alighting-board, and took her out and found she was completely disabled. I gave them brood, and they started other cells at once. She had not been hatched more than three or four days.

F. E. GASTON.

Tyler, Smith Co., Texas, Sept. 28, 1881.

The case is by no means rare, friend G., but it usually occurs during a season of scarcity or drought. As your queen was nearly or quite old enough to begin to sally out on her wedding trip, it may be the bees attacked her as she was returning. This sometimes happens, and it has been suggested it was on account of the different scent she caught from the drone. As far as I know, it is weak colonies that mostly do this; strong stocks, in their normal condition, are seldom guilty of such misdemeanors. Sometimes a colony will ball their queen, after the hive has been opened, but it is usually ill-tempered hybrids that do such things, if I am correct in the matter.

TWO QUEENS IN A HIVE.

One of my bee-keeping friends, Mr. F. E. Manchester, has a colony of very pretty Italians. In this colony he has two very nice queens. These two queens have been in this hive since July 22, and this is the first case of dual queens that ever came under my personal notice. It is a very beautiful sight to see them both walking about on the same comb. I have been trying to persuade him to give them to me, but he thinks he will keep them to show to visitors, as the stock is so very gentle and easily handled.

JOHN C. GREENLEAF.

New Boston, Mass., Sept. 2, 1881.

The case is not unusual, friend G., providing it is an old queen and a daughter. They often work together, for nearly or quite a whole season. If it were two queens put together which were not related, it would be something of an achievement.

BEE-STINGS AND RHEUMATISM, ETC., AGAIN.

I read GLEANINGS with much pleasure, and in fact any article I can find in books and papers relative to the honey-bee. I am nothing but a student in the A B C class, but I hope to know more of the business some time. Lost all (3 swarms) last winter; traded in June for a swarm in a box hive, giving a Root chaff hive for them; had one natural swarm, and one 6-frame nucleus; the queen, a dollar one which I got of friend Van Eaton, of York, Liv. Co., N. Y., proved pure. I like the Italians best. This article, however, is called out since reading the communication of J. W. Johnson, M. D., in October GLEANINGS, page 500, as *against* bee-stings for rheumatism, and another article clipped from a newspaper, page 504. I have a theory, founded upon the following: A near neighbor of mine has suffered more or less with rheumatism for many years. About two years ago he was sick for a long time, suffering with inflammatory rheumatism. He became convinced that the treatment that he was receiving was nothing but a series of experiments, and he, being so much reduced that, unless he got help at once, could not live. He therefore changed physicians, and this man, after examining him, said that his system was saturated with acid, and called for soda, which he mixed with water, and gave him to drink. The patient could not retain the first two or three doses. He was sponged in soda water, then packed, and before they were through packing he had fallen to sleep—the first sleep he had had in many weary hours. This treatment was continued until he was well—is well to-day, it being, I think, about two years since this sickness. I imagine the acid of bee-stings would not have cured him. He tells me of a person known to him, who has rheumatism from an opposite cause — alkali — so strongly charged that a white mark will follow his knuckles being rubbed on any surface. Perhaps the acid of bee-stings would prove beneficial in his case. Now, friend Root, if you think this may lead to any good, especially to the fraternity, you may put it in GLEANINGS, after having corrected as you see fit, or put it into that basket which I know you have near your writing-desk.

Geneseo, Liv. Co., N. Y. C. B. POTTER.

I declare, friend P., I hardly know whether our medical brethren will pronounce such reasoning orthodox or not. I have often heard of lemons for rheumatism and other ailments, and I feel pretty sure they are often quite beneficial too; but I am afraid they would be pretty rough on the man who could make a "chalk mark" with his knuckles. Wouldn't he effervesce, and come all to pieces? I presume the conclusion is, that bee-stings are good for some folks, and not good for others.

OUR WASTE-BASKET.

In regard to the waste-basket: You are wrong—I don't have any. The clerk who opens the mail does, and she puts into it all lottery schemes, gift enterprises, patent-medicine circulars, etc., but never a letter written by any real *bona-fide* live man. They are *all* answered at once, and then filed away, for fear the next time the man writes he won't put his State on, or something of that kind.

A SEEMINGLY UNEASY QUEEN.

I received the queen all right Sept. 21st, and today, Oct. 10th, I have just got her well received and settled down in her new home. On the day of her arrival I put her in the cluster, as directed, and closed the hive. In 2 days I opened the hive to look for my new queen, but did not find her in the cage or out. In about six days I found her and several eggs, which she had laid. The next day at night I found her whole family moved into another stock which I had that day made by uniting two. The next morning I rescued the queen from a ball on the bottom-board, and re-hived her and her bees in the old hive; but it was of no use; she came out again, and I hived them in another hive filled with dry comb, and the result was as before — she would not stay anywhere I put her, and went into another hive, bees and all, where I found her in the ball as before. I then introduced her to a strong colony with the hive nearly full of honey, where she seems to be contented. Can you tell me why she was so discontented, and shifted my bees around in this way? The hive she was first put into had not much honey in it, and was not very tight.

Madison, N. H., Oct. 10, 1881. GEO. F. JACKSON.

I think, friend J., your queen must have been something like the Hibernian who was arrested for having three wives, all living. When gravely remonstrated with for such a wicked course of doing he justified himself with the excuse that he was "only thrying to get a good one." Your little incident also starts a knotty point in bee culture. Can a queen lead out the bees, even if she should want to? If so, how does she get them to follow her? If a queen wants to go out of a hive, as a usual thing she goes, and the bees pay no more attention to the matter than if any other bee went out. How, then, should a strange queen be able to induce the bees of separate colonies to play such tricks as given above? I know they do, or at least seem to, for I have witnessed similar operations. In natural swarming, the queen does not lead out the swarm, for she is often among the last to go out, and sometimes don't go at all. I think, friend J., she stayed in the last colony simply because it was an old, strong, well-established stock; such irregularities as you mention are mostly confined to nuclei, or swarms made by uniting such.

ANOTHER A B C SCHOLAR.

This is my first year's experience with bees. My interest was excited by seeing and reading your suggestions in the A B C book, which by chance I found in one of the little towns of this State. The "book" pleased me, and I have followed its teachings with very much satisfaction, and, I may say, decided profit too, for I have abundance of honey, and six stands increase from my original four stands that I commenced with in the month of June.

TRANSFERRING IN OCTOBER.

One question I wish to ask: Is it safe to transfer bees at this late season of the year, with the advantage of good weather and plenty of stores for the bees?

I can get a hundred stands of bees for $2.50 per stand, in this county, most of which are kept in the old-style way (in square gums or boxes), and would venture to buy them if I could transfer them to my "modesty hive" yet this fall. If you have time and patience, please answer. E. J. DICKINSON.

Corydon, Wayne Co., Ia., Oct. 10, 1881.

If all of the conditions are observed, you can transfer bees even in October, but I should think it a job much more in the line of a veteran, than one of the A B C class. Do not buy a hundred, friend D.; but if you have the money so that you can easily spare it, try half a dozen, and let us know how you come out. Bear in mind what a risky business wintering is, even among the best of us.

COMBINED CRATE AND SHIPPING-CASE TWO TIERS HIGH.

I have not had any experience with the wide frames for getting comb honey, but am pretty well assured that I will not like them; but I should think the combined shipping-case and honey-crate just the thing for surplus comb honey, if it could be used in a Simplicity upper story, where two could be set one on top of the other. I have been using cases made on the same principle (I used them without separator, and got 25 cts. for most of my honey), and it seems to me they are the nicest arrangements to be found for getting surplus comb honey in section boxes. Set on a case, and when the bees occupy it all, elevate it and place another one under it; the upper one will then be filled and capped first, and can be removed and sent to market just as it is, if you do not use separators. Another one can be supplied in the same way the second was. This I suppose could be done with the chaff hives, but it can not with the Simplicities, unless the upper story be made of half-inch stuff. JAS. BORDER.

Sonora, Muskingum Co., O., Oct. 11, 1881.

The combined case can be used two tiers or stories high, friend B., by using a plain band, as it were, made of half-inch stuff, and but half the height of the Simplicity upper story. With the exception of the plan of carrying the cases to market just as the honey was stored in them, the wide-frame arrangement is much the most simple. The difficulty in using the cases two high on the hives is, that the under side of the case has bars for the sections to rest on, to raise them from the frames, and also to keep the under side of the sections clean. If you set a second tier over it you have this space and these bars between the upper and lower sections, in a way that would be very bad economy. All things considered, I think the wide frames most desirable where you have a colony strong enough to work in two sets of section boxes.

A DIFFICULTY WITH ATMOSPHERIC FEEDERS.

In using the pepper-box feeders, and feeders of that class, you know they must be taken out of the hive to be filled. Well, this is not all, for, in taking them out of the hive, you get more or less bees with them, and the others left exposed are often cross. The idea of confining the bees down in the hive by wire cloth, on which the feeder is to be placed, is very old, and I am sure I do not know why it has been so long abandoned. The friend who writes below brings it up again :—

I saw an item in the *Kansas Bee-Keeper*, by F. L. Wright, from which I have evolved the following: Take a strip of tin; make a ring, and cover with wire cloth, for a screen to set the pepper-box feeder on, and to keep the bees from getting out when filling. Make a hole in a quilt; put the screen in over the bees; fill feeder, and set over it. You are welcome to any part of the idea. G. H. MACKEY.

Milan, Erie Co., O., Oct. 1, 1881.

QUEENS STINGING WORKERS.

I notice on page 448, Sept. No., that friend Jones suspects a queen of killing the bees caged with her. Now, I am going to venture my opinion, that the bees died from some other cause, and the queen would have died also, but queens will outlive workers under all circumstances, because they are stronger, more enduring, longer lived, and fed and cared for by the workers, and, were it otherwise, queen-rearing would be quite a good business. I think it would be a sad breach of instinct for her Royal Ladyship to step down and bemean herself by bayoneting her subjects for nothing. I think that such a bee would not, in reality, be a truly developed queen in possession of all the instincts and functions belonging to the royal mother of the hive, and I would lose no time in convicting and executing her. But now I will give you a little of my experience with virgin queens. I put a young virgin into a cage containing another, and she immediately crawled upon the other one, and, without any resistance, deliberately stung her, and she expired in a few minutes. I have several times, in introducing a young virgin that had never met a bee, seen her pounce upon the first worker she would meet, and attempt to sting it, but would discover her mistake just in time to save its life, would release her hold, and travel on without molesting another bee. It appears that, when a queen emerges from her cell in perfect innocence, she must first learn the difference between a queen and a worker. Then her instinct leads her to assist in removing all rivals and destroying the structures containing them.

QUEER WAYS BEES SOMETIMES HAVE OF CONSUMING THEIR STORES.

The past season opened very encouragingly in this part of Southern Ohio. I got my dilapidated, dirtied, and soured combs all cleaned up and repaired by the bees, and every thing put in good order once more, and took about 1200 lbs. extra-fine honey from the top stories of about 20 hives. I left the lower stories untouched, which were all full, when the excessive heat and drought set in. I at once discontinued extracting, leaving some top stories full and others partly full, and now I have to feed almost every colony, even some that I left full above and below, or almost so, and I find that some colonies have consumed the stores in first story, and saved the upper story, while others have done just the contrary. D. A. McCORD.

Oxford, O., Oct. 10, 1881.

EXTRACTED VERSUS STRAINED HONEY.

To the Editor of Gleanings:—Whereas, bee-keeping having become one of the leading industries of the Pacific Coast; and bee-keepers take so much care to place their honey on the market in the best possible shape, discarding the old process of *straining* their honey, and adopting the more scientific and business-like way of *extracting* their honey with machinery for that purpose, thereby producing an article as pure as the best comb honey, therefore be it

Resolved, That our Pacific-Coast papers, in quoting *extracted* honey as *strained* honey; and also honey merchants, in speaking of liquid honey, calling it *strained* honey, are doing those engaged in producing *extracted* honey a serious injury that has been keenly felt for several years.

Individual efforts proving of but very little, if any, avail in changing the quotations,—

Therefore,—We, the bee-keepers of Southern California, in convention assembled, protest against the name, and request that all papers quoting our honey quote it as *extracted* honey.

By order of the District Bee-Keepers' Association of Southern California.

W. W. BLISS, Sec.

Los Angeles, Cal., Sept. 9, 1881.

A good blow in the right direction, friend Bliss. I indorse it most cheerfully.

ONE-POUND SECTIONS, VERSUS TWO-POUND.

We take the following from the *Bee-Keepers' Exchange:*—

The honey market can not be said to be open until after "fly time;" but a few lots have come forward. We have received 99 cases from the apiary of A. E. Manum, Esq., of Bristol, Vt. It was in one-pound caps in wooden side sections—a fancy package and fancy goods. We sold it for 24c; but we think this higher than can be sustained. Even today the same honey in a 2-lb. section would not sell for over 20c; but the smaller the caps or sections, the greater the consumption—consequently it has a better demand, especially here in New England among our operatives in the factories, who have but little money to spend, and they buy a small package when they will not a large one.

Two-pound caps are not offered very freely yet, but we anticipate the white stock will range from 17 to 20c; but *buckwheat honey will not sell here*, neither will a mixture sell readily.

A great many shippers have a notion that to grade honey is to throw away time and money; they put their best white caps on the outside and fill in the center with buckwheat, half-filled caps, and any thing, expecting that it is all going to be sold at the highest price. We often do sell it to run as it looks, until it *comes back on us*, then we have to do the best we can, and the shipper gives us a great blowing-up

for not doing any better. We hope to see it graded 1st, 2d, and 3d quality, and marked so we can tell without opening. FAVOR & DUDLEY.
Boston, Mass., Sept. 16, 1881.

WHAT A GOOD COLONY IS WORTH.

I found one of my colonies of bees in so good condition in the spring that I concluded to carefully weigh the honey as I extracted from it, keeping it separate until after weighing, and before the dry weather had stopped their gathering. I took 232 lbs. from the upper story alone, leaving them all they had in the lower story for their winter stores. I report this to show that one colony in such good condition is worth half a dozen in poor or bad condition. WM. MCCORD.
Oxford, O., Oct. 10, 1881.

Reports Encouraging.

REPORT FROM C. C. MILLER.

IN my home apiary, the number of colonies in spring was	55
Increased 78 per cent to	98
Took lbs. comb honey,	6376
" " extracted honey,	200
In the Wilson Apiary,—	
No. colonies in spring,	12
Increased 575 per cent to	81
Took lbs. comb honey,	112
" " extracted honey,	1116
Taking both apiaries together,—	
I had in spring,	67
Increased 167 per cent to	179
Took lbs. comb honey,	6488
" " extracted honey,	1316
Total lbs. honey,	7804

or 116½ lbs. honey for each colony, spring count. Coming directly after a year of disastrous failure, I feel deeply grateful to God for the success of this year. C. C. MILLER.
Marengo, Ill., Sept. 24, 1881.

We are very grateful indeed too, friend M.; but your brief report is almost as tantalizing as that of the man who explained how he lost his leg, by saying it was "bit off." Did you manage those 12 stocks so as to increase them from 12 to *eighty-one* yourself, or did Mr. "Wilson" do it, and how was it done,—natural or artificial swarming? Please tell us all about it. [See p. 534.]

I commenced in the spring with 7 weak colonies; increased to 21 fine swarms of bees; obtained 250 lbs. extracted, and 200 lbs. box honey. Sold extracted at 20c, and box honey at 25c per lb. I obtained a dollar queen of you in September, 1879, which produced the extracted honey obtained. They are beautiful bees, very gentle; I can handle them at any time without smoke. They have at present two stories filled with honey, and the third story is more than half filled, and honey is coming in yet. My bees are in nice condition for winter, with plenty of young bees and brood.
WM. PARMERLEE.
Bean Blossom, Ind., Oct. 12, 1881.

My bees have done pretty well. Have 1200 lbs. from my 25 hives. Extracted 200 lbs. Box honey, 1000. Increased from 18 to 27. J. W. MURRAY.
Excelsior, Hennepin Co., Minn., Sept. 26, 1881.

I have had quite good success with my bees this season (for a greenhorn). I was in Ohio during all of white-clover and basswood, with no one except my daughter to attend my bees during swarming. She saved all the young swarms but one, which left the hive after she had them safely hived, as she supposed; yet I increased from 8 in the spring to 23 heavy swarms, and secured 400 lbs. of nice fall honey in 1-lb. sections, which is selling for 20c per lb. I have just secured both first and second premiums on my honey at the Benton Harbor fair, which I think is doing pretty well for fall honey.
WM. L. KING.
Benton Harbor, Berrien Co., Mich., Oct. 6, 1881.

Blasted Hopes,

Or Letters from Those Who have Made Bee Culture a Failure.

FRIEND ROOT:—You had a great deal of trouble at first, and now I suppose I must go through the same ordeal. Through the kindness of the postmaster at Corinth, I received the queen last Saturday, safe and sound; too late, though, to get a queen out that night, so I took one out Sunday morning, which I suppose was wrong. I then put her in, cage and all, 48 hours. I then released her, and they killed her in two minutes. I caged the queen which I took out of the stand, and she died too, so I have a stand queenless. I think there must be something morally wrong in shipping queens to our little villa, as out of 7 there is only one alive, and she is injured from the introduction. I am about disgusted with bees, any way. I have 30 stands, for which I will take $60.00; all Simplicity but two. J. S. BAXTER.
Kossuth, Miss., Sept. 28, 1881.

I have not given my report for last winter. I went into winter-quarters with 24 stands—15 in boxes from 4 to 8 in. thick, crammed with cut hay, 8 on summer stands; came out in the spring with 7; have 14 now; got no honey; have had to feed maple molasses to some of the young swarms. I lost more bees in the boxes than on summer stands. I saw some favorable reports from men wintering bees in boxes. I haven't noticed any report from those men this season. I would like to hear from them. I have been in the bee business 3 years. White clover has been a failure all the way through. My bees always do well as long as poplar and locust last. When that is over, all is over. We had an abundance of white clover, but no honey. I have 30 or 40 good hives, never been used, I would like to sell. They cost me $1.50; I will sell cheap. They are well made. They are made after the L. fashion. The frame is the size of the American, hung on rabbets; is made out of the best yellow poplar, well dried. If you want them I will ship them to you at whatever they are worth. I don't want to stack and burn them. I believe I will give my attention to blue grass and cattle. D. F. STEELE.
Gosport, Owen Co., Ind., Oct. 1, 1881.

Your hives are not of the kind in regular use, friend S., and on that account I fear you will have trouble in finding a purchaser. This is only another illustration of losses that result from each one who commences starting out with something different from the regular goods in common use. If your hives were Simplicity or chaff hives, or even some hive that holds the regular L. frame, you would have little trouble in disposing of them at any time. I admit that you have had, so far, but little to encourage you, but I think you will miss it if you dispose of your stock on hand, at a sacrifice. Just hold on to your bees, but make up your mind you are going to stop outgoes, at least until they bring something in, and, my word for it, you will soon be in the Smilery, like the many who have gone before you. Stop investing any more money in them, but be quiet, and keep *cool*. You will find that "blue grass and cattle" have their ups and downs too.

I will write you a few lines, and tell you about the bees in this part of the country, as I have not seen a report from here yet. This is a very poor place for bees. I have kept them for 4 years, and the best season I can get only about 10 lbs. per colony, and some seasons can not get any. Now, you will say, "Why, B., may be you do not understand the business," and may be I don't; but I ought to. I have read books enough. I have read Cook's new manual, and several others, besides GLEANINGS nearly a year. It is the poor country—too poor for white clover to do much good. I wintered 6 colonies without loss, but did not get a pound of honey to sell. I think I will quit until I can get in a better location. Now, friend Root, I see by GLEANINGS that you employ a good many hands. If you can give me employment, I would try my best to please you.

R. A. BAGSHAW.

New Providence, Ind., Oct. 6, 1881.

Friend B., if you will listen to me I am sure you will come out all right. When I commenced here in Medina Co., I was told, just as you have stated it, that it was only the best seasons that bees would give even 10 lbs. to the colony. In less than 5 years I had secured over 300 lbs. from a single colony. Keep right along and stick to it.—I am constantly overrun with applications for places, and the world is full of people wanting somebody to set them to work. There is work, plenty of it, I feel sure, right where you are. Please do not think me unkind; but I have had so much experience in this matter, I am sure I am right. Take up any thing you can get hold of, and work so diligently, and with such care and energy, that everybody will be wanting you. Work at something evenings, rainy days; work any way, even if you do not get more than 3 cents an hour; stick to it, and very soon you will have all you can do, at prices that *will* pay.

Notes and Queries.

SCOTLAND.

MY bees are working splendidly, and give me, during the very few leisure hours I have from business, immense pleasure. No swarms yet. I have secured a copy of your A B C. Your apiary must be delightful to witness.

JOHN MAIN.

Doune, Perthshire, Scotland, May 18, 1881.

HOLY-LAND BEES.

I have some bees from my Holy-Land queen, similar to black mud-wasps, only not quite so long.

J. W. MARSHALL.

Constantine, St. Jo. Co., Mich., Sept. 3, 1881.

SIDE-STORING BOXES.

I have nineteen colonies now in good condition for wintering. I have the Quinby hive. I like the side boxing the best of any thing I ever used in that line.

G. G. KENYON.

Central Square, Oswego Co., N. Y., Sept. 29, 1881.

HONEY FROM COTTON.

I have some honey stored from cotton bloom, which I think excels any honey I ever tasted, in point of flavor, and is as pleasing to the eye as to the palate.

F. N. WILDER.

Forsyth, Ga., Sept. 19, 1881.

POLLEN.

Neighbor H. put that pollen too close to the bees; their heat soured it. When bees fix themselves for winter, the pollen is found outside of the cluster. When winter sets in it helps to keep them warm, as a board would, or inner wall.

M. E. WILLIAMS.

Vanceburg, Ky., May 24, 1881.

A POUND OF BEES IN JUNE.

I feel it my duty to report in regard to the pound of bees you sent me. I received them the 12th of June; the 25th of August they sent out a swarm of 6¾ lbs., and left a good swarm in the old hive.

WM. T. WEBSTER.

East Jeffrey, Cheshire Co., N. H., Sept. 11, 1881.

I have not done as well as our friend Coggshall, but am well pleased with the results, as I have worked on a farm all the season and cared for my pets (18 stands of black "humming-birds"). They will all take new homes in the spring in Simplicity hives.

K. GARDNER.

Hoosick Falls, N. Y., Oct. 10, 1881.

AND NOW IT IS "HURRAH FOR TEXAS!"

I have a report to make on my bees this season. Will wait awhile, as they are not done gathering honey yet. I have one hive that has given me 484 lbs. to date—300 extracted and 184 comb honey, and they are filling another upper story.

Dallas, Tex., Sept. 28, 1881. E. J. ATCHLEY.

Last year the bees worked on corn, but I could not see them on sunflower; this year they are on the sunflower and cockle burr, but do not touch corn. Why is this change?

ISAAC B. RUMFORD.

Bakersfield, Kern Co., Cal.

[Such cases are frequent, friend R., and they should teach some of the A B C class to be a little more careful in saying they do not believe bees ever work on certain plants, just because they did not under their own observation.]

I gave the Clark smoker a fair trial. I would not give one of Bingham's for a dozen of them. I have sold it and sent for a Bingham.

J. K. SNYDER.

Tiffin, Johnson Co., Iowa, Sept. 5, 1881.

[There, "that's just as I expected." I believe it is the first complaint we have ever had in regard to the hundreds of 50-cent smokers we have sent out; but this is a complaint, and a "stunner" too. Friend Bingham, here is a testimonial for *your* smoker; it is strange, if there isn't some good to be got out of it somewhere.]

We are having a splendid flow of honey just now, the latest in the season I ever knew. I have to-day thrown out 7 gallons of fine fall honey, taking only a frame or two from those hives where the queens had no room, or not sufficient for brood. The honey is gathered from the wild asters, and is of a beautiful yellow color, but rather thin. S. L. Greer.

Friendsville, Blount Co., Tenn., Oct. 5, 1881.

Please tell me what kind of frame Neighbor H. uses. I am anxious to know, since he wintered so well last winter. Robert M. Teats.

Globe Mills, Snyder Co., Pa., Sept. 30, 1881.

[Neighbor H. first used the Adair frame; but now he uses the Langstroth frame in chaff hives, and says you could not get him to take any other frame or hive as a gift.]

CYPRIANS AHEAD.

Queen duly to hand; introduced to an ordinarily good colony; in four weeks she had so built it up that they were preparing to swarm, though in the middle of September. We put on an upper story, gave her 10 additional frames, which she is filling up very fast. I never had a queen lay so well; if this be Cyprian, I want more of them.

Stelton, N. J., Sept. 22, 1881. G. W. Thompson.

I commenced the season of 1881 with 48 colonies, one-half in good condition, the rest weak; have taken off about 1100 lbs. in 1-lb. sections, and about 1400 lbs. extracted. I have fed 200 lbs. granulated sugar, and have sold bees and queens enough to pay for it; have about 80 colonies now in good condition. Have never failed to have a fair income from my bees. John T. Newton.

West Richfield, O., Oct. 17, 1881.

USING HONEY FOR SHIPPING BEES BY THE POUND.

Why not put about 1 lb. of thick honey in a tin bottle with cloth fastened over the mouth, and fasten this bottom upward in the box when shipping a pound of bees by express? Chas. Kingsley.

Greenville, Tenn., May 24, 1881.

[Bees would gnaw through; besides, honey does not seem to answer as well as sugar for shipping bees.]

HONEY-DEW THAT BEES WON'T GATHER.

[In answer to our query on p. 450, Sept. No., friend Greer writes as follows:]

The honey-dew mentioned in last Gleanings, so far as I could judge from appearance and taste, was as nice and sweet as I ever saw, and lasted a good while, say 2 or 3 weeks, yet bees did not gather it. The drought here for two months past will cut the fall supply of honey short, unless frost delays its advent awhile. S. L. Greer.

Friendsville, Tenn., Sept., 1881.

STIRRING UP POSTMASTERS.

In the postoffice this morning I told the postmaster that there certainly was one journal kept back. He looked in another place, and found the August No. that I have been writing to you about. I have got it. Jas. H. Brown.

Creston, Ia., Sept. 24, 1881.

[You see, my friends, how we sometimes get blamed when the trouble is not at our end of the route at all; for all that, we always supply missing copies without charge, and expect to; but please be mild when complaining.]

DE WORTH'S PERFORATING MACHINE.

I have tried the machine, and it did all that it was claimed it would, and gave entire satisfaction. If you want to give Mr. DeWorth a puff in your paper, and sign my name to it, please do so. It is a splendid piece of work. If Mr. DeWorth gets up such machinery he deserves to be recommended by every bee-keeper who buys and uses one of his machines. Christopher Grimm.

Jefferson, Wis., Oct. 17, 1881.

HONEY IN NEW BRUNSWICK, CANADA.

I have been extensively engaged with bees, and have sold from my bees as high as ten tons of box honey in a year, and though now in the nursery and orchard business, I yet take an interest in bees. Would pay for any reading matter on them of interest. F. P. Sharp.

Woodstock, N. B., Can., Sept. 11, 1881.

[It would seem from reports that as much, if not more, honey is produced in Canada and vicinity, than in the parts further south. Is the northern part of North America being developed for the honey-bee as it should be?]

MARKING WEIGHT ON SHIPPING-CANS.

I see in Oct. Gleanings, the suggestion of having weight of packages marked on them before they are filled, which is good so far, but I would improve by having printed labels, like this:

Weight of package, ... lbs., ... oz.
Weight of contents, ... lbs., ... oz.,

leaving a space before "lbs." and "oz." blank, to be filled as needed; then if the labels were printed in sheets, and gummed, as our postage stamps are, they would be as handy as a pocket in a shirt, and could be used for all kinds of merchandise where separate weights are wanted.

Cleveland, O., Oct. 17, '81. A. A. Fradenburg.

[Thanks, friend F. We will print such labels for 10c per 100; by mail, 12c.]

Ladies' Department.

I HAVE eight swarms, and love to work with them, but Mr. M. is afraid of them, so I have no help. He loves to read Gleanings as well as I do, but begs to be excused when I want his help around with the hives, where the bees are. We are having lovely weather here now, and the little creatures are as busy as they can be.

Mrs. M. E. McCullers.

Medville, Burk Co., Ga., Sept. 26, 1881.

I am much ashamed of the neglect to sign my name to my last letter (containing money too), and that such an omission may not occur again, I wish you to send me one of those rubber stamps. I wish my name and address and name of apiary. I am in a hurry for it too, because I wish to stamp all my honey with it. I can brag of a black colony giving 98 lbs. of honey in sections.

We have a famous old elm-tree over 100 years old, which came from Boston Commons, on our place; therefore I name my apiary after it.

Mrs. T. M. Squire.

Elm Tree Apiary, Redding, Conn., Aug. 10, 1881. ☜

MR. MERRYBANKS AND HIS NEIGHBOR.

Not slothful in business; fervent in spirit; serving the Lord.—ROMANS 12:11.

JOHN'S father thought he had never before in his life tasted any butter like that he found on the table that Sunday morning. It was because God sent it, and the things that God sends are not to be compared with any thing else in this world. Perhaps some of our readers may prefer to have me state it in a different way. Well, one reason why he thought the butter so very nice, was that he had been doing his duty, not only in using the Sabbath morning in a way he knew to be right, but that, when he sat down to the table, instead of pitching in and helping himself to the best of every thing, he waited on each of the children, and even passed to his wife the things she could not reach readily. When he saw that they were all lacking nothing, he helped himself. Also, the plate of butter was brought over by Freddie Merrybanks the evening before, saying his mother wished them to try a sample of the butter made from the fine Jersey cow that they had just purchased. Simple enough, was it not? Well, John's father thought God sent it, and I entirely agree with him; but you, my friend, may think otherwise if you wish, and we will not feel hard toward you, either. If you wish to have the butter good, try passing it to everybody else before you take any, and I assure you it will improve it amazingly, even if it be not made from a Jersey cow. John's father had just decided to try to follow Jesus, and so he "pleased not himself;" but I do not believe he knew where in the Bible it read so. Do you?

The whole family went to church, and as it was but a little way they went easily on foot. Our friend was a good deal interested in the sermon, but as there was not very much in it that applied directly to those just taking a start in the new way, he did not enjoy it as much as he did the Bible-class, where he could ask questions. His questions were of such a strange, out-of-the-way kind, that he not only puzzled the teacher, who was the pastor of the church, but called the attention of many curious eyes toward him. I will give just one for a sample.

"Can a man be a Christian, who does not pay his debts?"

It may be that it was the money he owed for that horse that lay heavily on his conscience; but be that as it may, it convinced the good pastor that his pupil was really in earnest, and it stirred him to unusual life and zeal, not only in the answer to that question, but through the whole lesson. With an inward prayer of thanks to God, that at least one seemed to be inquiring the way, he raised his spectacles, and, with a kindly smile beaming on his face, he replied to his questioner,—

"Really, friend Jones, I am not sure that questions of this kind admit of being answered by a simple yes or no. Had you asked if a man could be a Christian, who did not mean or propose to pay his debts, it would have been somewhat different, for all mankind would then answer alike, skeptics as well as Christians. Now, on the other hand, you know there are those who, in spite of all they could do, can not meet their just obligations; one on a bed of sickness, for instance. In that case, would it be right to say he could not be a Christian?"

"Well, how hard ought one to try, who is not sick?"

"Why, my friend, I hardly feel competent to say; but I am pretty sure the harder he tries, the better Christian he will be—the more will he feel God's approval. You know the Bible says,—

> Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy strength, and with all thy mind; and thy neighbor as thyself. —LUKE 10:27.

That last clause seems to indicate that we ought to try pretty hard before deciding we can not give our neighbor that which is justly his own, should we not?"

"Will you please tell me where that text is?"

The teacher smiled at his almost boyish eagerness, and said,—

"Here; hand me your Bible, and I will mark it with my pencil."

It was his wife's little Bible that he handed out, and as he did so he glanced at her naturally. There was a tear glistening in her eye, but with it was a look that told to him what others could not see. When they were first married, she had an eager longing to have him stand well with the best people, and a true wifely pride in thinking he was a man among men. This hope, as it were, had almost died out through the idle and shiftless life he had passed; but now the hope had sprung up afresh, and through the thanksgiving to God for this change that seemed coming, there was, in that look, as she saw how pleased and animated the minister had seemed in this little talk, more than words could well tell to her husband. He saw his wife's hands, worn with toil, and glanced across the little church to where John and Mary were. He took in at a glance the way in which their poor clothing contrasted with the comfortable though plain apparel of the rest of the congregation, and it seemed to him that, if God would only grant the same health he had enjoyed during those wasted years, he would ask no greater blessing. What a dear good kind man was their pastor! Why, it would be almost heaven upon earth to be permitted to live near such a man, and to help him, even only the little that *he* might do, in his God-appointed work of saving souls.

On his way home, the text—*his* text—was running constantly through his mind. As they sat down to dinner, without thinking he read it again from the little Bible, and, as a short silence ensued, it seemed to occur to all that this was their first asking of God's blessing, before partaking of their food. It seemed just then to the father that it would be a pleasant, happy thing to repeat this text, or something like it, as they gathered around the table before every meal.

If I am correct, during their talks and plans for the future during that Sabbath afternoon, there mingled in some plans and suggestions for business. The horse was talked about, and, I believe, nicely fed and brushed up. I do not know but that the father, as well as John, was a little impatient to commence work. In the evening they all attended a temperance meeting at their little church. *Their* little church. The thought came up to the father, that, so far in his life, he had never given one solitary copper to the support of it. The children had taken some pennies to the Sabbath-school, but no one in the world had ever seen him take a coin out of his pocket for the support of a church or minister. Just now he had not one copper in his pocket; but before another Sunday came, something seemed to promise there would be some. Several of their own people spoke at the temperance meeting; but our friend had a sort of feeling that he would prefer to try at least one week before saying any thing in public about what he was *going* to do. The old pipe lay on the mantel-piece still, and it had not been touched for *one whole day*.

"John, who can get up first in the morning — you or I?"

"Why, father, what are we going to do?"

"We are going to put our corn-field in the nicest trim of any one's in the neighborhood, and then we are going to do something to pay for old Jack, and get the mortgage from off our little home."

"Shall I call you as soon as I am up, father?" said John, with a slight twinkle in his eye.

John was up by sunrise, or a little before, but he did not call his father. The horse was up and hitched to the cultivator, and John came in just the nick of time to go on with the work. Before night the field was cultivated twice in a row both ways, and hoed so nicely that scarcely a weed could be found. To be sure, no weeds in between the stalks were skipped, the old dry hard earth was pulled away, and fresh mellow soil put around in its place. More than one of the neighbors stopped and looked at the field, remarking, "Well, Mr. Jones has done a nice job on that corn-field, after all." Several times during the day there were opportunities to stop and talk, but he resisted the temptation; and, while he was courteous, gave them to understand he was busy.

At one side of his lot, near the house, was a wet, swampy place. As it was too miry to be of any use, it had become a sort of "catch-all" place for old rubbish. Old boots and shoes; rusty, worn-out tea-kettles, oyster-cans, feathers, broken crockery, empty boxes, etc., had been thrown into this place promiscuously, and, as it was a handy place, slops and soapsuds had also been thrown there. The ducks and chickens, finding the rank foul weeds a sort of shady place, had also passed a great deal of their time there, until the stench of the place had somehow led everybody to avoid it. As it was next to the street, it added very much to the untidiness and uninviting appearance of the place. John's mother had often asked if a ditch could not be dug so as to let off the wetness, but it had never been done. Right near the spot was a low place in the road, and a small bridge had been built over it to take the water that seemed, winter and summer, to be oozing out of this miry place. It was the middle of the afternoon when the corn was finished, and he felt a terrible longing to sit down with his pipe; but with a prayer to God for help, he told John, after he had rested awhile, he might help him down by the bridge.

"Why, father, what are you going to do down by the bridge?"

"When you come down I will tell you."

"Why, I'm not much tired; I guess I will go now."

A small pool of water lay under the bridge, but Mr. Jones found it was mostly owing to a great growth of peppermint, just below, on which the bees were just then busily at work. With hoe and shovel and spade he soon let this water off, without interfering with much of the peppermint either. Then he went above the bridge and cleaned out the channel clear up to his own fence. After getting out the gravel and mud, he found a soft rock that he could cut pretty easily with his pick and spade. John brought his kite-string, and it was stretched from the spot at the fence, right up through the wettest part of that unsightly slop-hole. After the rock was laid bare, a channel the width of the spade was cut into it, deep enough to take all the water, and over this were placed short pine boards, made by cutting up old dry-goods boxes found about the premises. The boards were laid crosswise on the rock, so as to support the dirt more effectually. Mary and Freddie were here by the time the work was well started, and Freddie suggested they should hunt flat stones, so as to make the covering as durable as the sides.

"Yes," said John, "and we can take that tinware and pound it down flat, and use that."

"Why," said Freddie, "my pa has a pair of shears to cut tin, and I know he will let us have them so we can cut the tin up and make it go a great deal further."

Mary here chimed in, "And I can hunt up all the old tin pails and basins and wash-boilers, and get them out of sight and make them do good."

The shears were brought, and some other children, hearing that old tinware was wanted, brought such a lot that there was a fair prospect of having a whole metal covering for the whole. John soon found he could cut tin quite expertly, and began to think a great deal of the tinner's shears. So interested did they become in the work, that Mr. Jones, almost for the first time in years, felt sorry that it was too dark to work longer. He felt tired, and his muscles were somewhat sore after his severe day's work, but he was happy. His text had been with him all day long, and there was a sort of feeling in his heart that a great, great friend, somewhere in the universe, was saying well done. Before going to his rest he went out by the bee-hives again and thanked God for the great new happiness that was coming into his life. He was asleep almost as soon as he touched the pillow. His wife retired a little later, and noted that even on his face when asleep, there was a hopefulness and peace she had never seen before. It was because God was leading and he was following. Before night of the next day they had got up into the worst part of the slop-hole. John suggested using the old boots for a covering, to get them out of sight, as well as the broken crockery and tinware; but friend Merrybanks, who was a much-interested spectator, said there was a better place for old boots, shoes, bones, feathers, etc., and all kinds of animal matter, and so they were carried to the manure or compost heap, near the stable. The surface of the rock here was more uneven, and finally, all at once the water spouted right out of one side of this ditch. It poured out into the stone channel, and made a gurgling merry brook as it went down under the bridge. John's father dug out a little where the water seemed to come from, and found a basin of white clear sand, after the mud had washed away, and through this sand the water bubbled and boiled, as if it were water boiling in a kettle.

"A spring! a spring!" came from all hands, and every one had to rush up, in spite of the mud and stench from the place, to see this wonderful spring. Friend M. spoke,—

"Look here, neighbor! I have got an oil-barrel, with both heads out, that I think we can fix right over this."

"But it will taste of the oil," said John.

"No, for we will burn the inside with shavings until it is charred. This will take off the taste and smell, and also prevent it from rotting."

The barrel was fixed, and, after charring, the hoops were driven tight, and nailed. After setting it over the spring, some tough clay was found and spread around the inside, and the same kind of clay tamped solid around the outside. While doing this, a small passage was left for the water into the stone drain. Before stopping this and making the barrel fill with water, some provision was to be made for the overflow. Friend M. said he had a tin eave-spout that he thought would just about reach down to the road by the bridge. While John is despatched to bring it, I shall have to explain that he had, some time before this, built a sort of playhouse for Mary, in the corner of the lot, near the bridge. The roof was simply some boards laid over, and the angle in the fence formed two sides. Well, the tin pipe, when put in place, came out just in front of this playhouse. It chanced to be of just about the size needed to drive into the bunghole of the barrel, and this brought it underground enough to be out of the way for plowing. After all was fixed, and the pipe covered up, a ball of stiff clay was forced into the channel where the water ran into the drain, and all watched breathlessly to see if the clay was impervious enough to confine the water. The water did not quite stop in the drain, it is true; but this indicated that the water was coming out of the wet, springy ground, for the barrel was slowly filling up. Very soon it was up to the tin pipe, and as the tin was nicely turned over and tacked to the inside of the barrel, the spring was soon all flowing out through the pipe, and pouring in a little waterfall among the gravelly pebbles down by the bridge, right in front of the playhouse. John, in anticipation of the moment it would come, had one of his old water-wheels, supported on a couple of forked sticks, and in no time the wheel was spinning like a thing of life, and spattering the cool spring water in a most refreshing way on that hot summer afternoon. At this point, Uncle Billy drove along.

"Why, neighbor Jones, have you really found such a nice spring in that wet, nasty place?"

"So it would seem," said John's father, pleasantly, although he remembered vividly about the cow and the honey.

"Well, now, we have just been talking of a trough down in the woods, that would fit this place exactly; and if you wish to allow this water to be used as a public watering-place, the trough is at your service, and my men will bring it over this afternoon."

Mr. Jones was surprised. In fact, all were a little surprised. Freddie ventured,—

"Why, are you going to fix it so everybody can just drive right up here and let their horses get a drink whenever they want it?"

"That is the idea exactly, my man," said Uncle Billy. Thus encouraged, Mary looked up into the rich farmer's face, and ventured,—

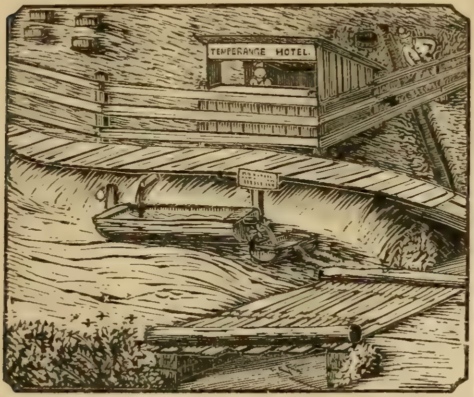
"Hadn't you ought to bring a little trough, so the dogs can drink too?" Her father chided her gently for her presumption, but she had read Uncle Billy better than he, for the reply came,—

"Yes, my girl, we will bring a little trough for the dogs to drink out of, so they won't go mad in a dry time, and you are to take care of it, and keep it nice and clean."

The trough came, with a little one attached to one end. A hole was bored in the end of the large trough, with a hollow plug in it, and through this hollow plug the water fell into the little trough below. That the trough might not get pushed about and injured, the men brought a couple of solid posts, and before they went away the whole was most thoroughly stayed with spikes, and additionally braced to the posts of the fence. It did not take John very long to fix the water-wheel right over the dogs' trough; and, almost before they knew it, half of the little village had gathered about Mr. Jones's new spring. By some unknown means the minister came too; and, after shaking Uncle Billy cordially by the hand, and thanking him for his assistance in the matter, he found a clean white shingle, which he tacked to the fence, and with a piece of coal wrote on it as follows:—

Ho! every one that thirsteth,
Come ye to the waters, and drink.

Of course, everybody had to look down in that black barrel, and see the white sand bubbling and boiling in the clear spring water; but through it all, Mr. Jones was still busily at work. The drain in the rock, with the flat stones laid over it, and the cut-up tinware laid nicely over them, was not yet filled up. He was just now cutting down the tall rank weeds, and stamping them in the drain, before throwing on the dirt. Even late as it was in the season, he had a plan of raising a crop there before winter, and he was in haste to get the ground dry and ready to plow. I think I shall have to give you a picture of—


TEMPERANCE HOTEL.

THE WATERING-TROUGH BY THE BRIDGE.

After seeing the minister mark on a shingle with a piece of coal, John thought he would try his hand at it, and you will see a sample of his work up over the playhouse. On the post by the trough you will see a tin cup hanging. Well, this tin cup has a pleasant history, and unless I am very much mistaken, it (the history, not the cup) contains something helpful to more than one of my readers. It is too dark to work, and all the family, except John, are sitting on the log that goes across the bridge, listening to the ripple of the water as it falls from the water-wheel.

The ground was pebbly and sandy near where the water flowed out of the small trough, so there was but little danger of its being muddy; but back, further up the bank, there was a spot of clay. As there were a great many stones in their garden and corn-field, Mr. Jones was speaking about having them all gathered up and put around the watering-trough, that it might not get muddy for the horses as they came up to drink. While he was planning how he would make a stoneboat for drawing the stone, both from the adjoining roadsides as well as from the garden, John came running up, saying,—

"O father, father! the bees are actually building comb again in the boxes. I thought they were gathering honey in the pail bee-hive, and so I went and looked in them outdoors, and the boxes are full of bees, and you can see the white comb where it sticks out of the cluster. They are just more than scrabbling around and working."

"Scrabbling?" said his mother.

"Well, you just come and see if they don't 'scrabble.'"

"It must be from the peppermint," said his father.

"Father," said Mary, "you do not think Uncle Billy is 'an old curmudgeon' now, do you?"

"No, my child, and I was very wrong and wicked to have spoken so of any of my neighbors." The next sentence was spoken more to his wife. "Can it be possible that this is the same world, and the same people that I knew only last week? Is it really possible the change is only in my poor self, and nowhere else?"

Our Homes.

DEAR FRIENDS:—Did you never hear of a minister asking a friend in whom he had great confidence, to occupy his pulpit in his stead once in a while? Well, I do not mean to say that I have a pulpit, or that I am a minister, by any means; but I know something of the great crowd of friends that look monthly for the talks I have given you here; and while listening to a sermon a Sunday or two ago, I could not help thinking how much I would like you all to hear it. It was not so much because it was remarkably able, as it was that it happened to be right in the line of my teachings and my talk to you, and because I know that there are some of you who think you have almost too hard a time of it in this world. I have often thought that you little know what a blessing it is for you that you did have a hard time, and that you did have to work and scrape for every thing you enjoyed; but it seems to me I have never been able to tell it so plainly and clearly as has our young friend, Rev. G. J. Webster, of Weymouth, Medina Co., Ohio. It may be well to state, that I never saw him until my eyes rested on him in our pulpit, and I was very much inclined to murmur at seeing the face of a stranger, in place of our regular pastor. I finally decided that it would be a better spirit to accept him as one whom God had sent. Now I wish you to welcome his kind, hopeful words in the same way. May the spirit of the Master carry these words home to *your* hearts, and into your *week-day lives*, exactly as they were carried into mine!

My brethren, count it all joy when ye fall into divers temptations.—JAMES 1:2.

Without doubt, the word here translated "temptations" is not to be taken in the ordinary modern sense; i. e., an inducement to do some wicked thing; but, rather, it means something evil to be borne. The Greek word means, a putting to the proof; proof, trial, calamity, affliction. It means, also, a direct temptation to sin, but hardly in the text. There the apostle exhorts the saints to rejoice in every trial, or testing; that is, all loss, evil report, persecution, sickness, death, etc., for they are good, even though they be evil.

Let me then take for the topic of this discourse, this subject, drawn directly from the text already given—

THE GOOD OF TRIAL AND DISCIPLINE.

Judging from the habit of the world, we should infer that its value was chiefly medicinal; trials are to be taken, only because we must, and never with joy. Everywhere we find parents and friends who plan and work with might and main to keep away trial of every kind from their loved ones. How many young people there are, especially girls, who are reared as carefully as hot-house plants. They are taught only what is pleasant to know—the accomplishments; they never soil their hands, or harden their muscles by severe labor; they are kept carefully away from all sights and sounds that might shock their delicate senses; as far as possible, every wish is gratified; "they toil not, neither do they spin." Quite common this is with the children of the rich, and to a less extent among those who are not rich.

Many parents who have been reared in the hard school of poverty, and have come out of it sturdy, self-reliant, and strong, say one to another, "I don't want my children to have as hard a time as I had." So, ofttimes, they make their own life harder that their children's may be easier. Many young men, perhaps from sheer affection, refuse to marry until they can place their wives above all necessity for labor; and many young women—from self-love, however—who will not marry until they find a man who not only lòves them, but can keep them in ease and luxury. Indeed, the whole system of the training of women in the upper classes, in the past, and among some nations and classes of society now, seems to have had this idea at the root of it—that woman was to be care free, to live easy, to look pretty, to be good-natured, and not to trouble herself about any thing else. That was her sphere.

I can not speak too strongly of the foolishness of this system. It runs counter to all the teachings of Scripture and nature and experience. These ever teach that the best results in character can only come through some form of trial and discipline. It is absolutely impossible that creatures such as we are should be allowed to have every thing pleasant; to do just as we wish, and have every thing our own way. *That* can be only for those who are perfect in wisdom and in love. The perfectly wise will always *know* what is best: the perfectly loving one will always *choose* it; and such, and only such, will it be safe to trust fully.

We need only to look at the results of such a system, to convince ourselves of its folly. See the great army of spoiled children, who, "left to themselves, have brought their mothers to shame;" the dissipated, licentious, worthless sons of rich men, who themselves have worked and schemed to make money for their children, but have ruined them by it; the idle, trifling young women; the wasters, the poverty-stricken; the vicious slaves of bad habits engendered in the days of plenty,—all these show the folly of a life of ease and gratification.

Depend upon it, God's plan is the best one, *always;* and that is, not to furnish men with every thing in such quantity and shape as to need no thought or toil on their part, but rather so that every thing *good* they have shall be the result of their own earnest, careful labor. * * * *

I have heard people speak of the "gospel of work," and I thought the phrase a most fit and beautiful one. In work, there is salvation; a salvation absolutely essential, without which no amount of what is called religion were of much worth, or could be long sustained. That is to say, no good principles or beliefs can save one without he do good acts too; or, in other words, good action is as much divine, as pleasing to God, as speech or belief. Orthodoxy is not more essential than orthopraxy. One is not necessarily more pleasing to God, when, filled with religious fervor, he is shouting and singing at a camp-meeting, than when, quietly plodding along between the handles of his plow, he follows his team over the field. The old monks had a saying, that, "to labor is to pray;" and Carlyle says, "If work be not worship, then the more pity for worship, for it (work) is the divinest thing yet discovered under God's sky." Most surely, work, effort, something to do or bear, is good, not only for the results accomplished outside of ourselves, but also for what it works in us. For that, the trial is something to be rejoiced over.

I should not wish to leave the idea, that trial and discipline are good for their own sakes. That can not be true. I can't like pain because pain itself, abstractly considered, is a good thing; nor poverty, because it is pleasant to be poor; nor the consciousness of ignorance or weakness, because it is good to be thus; nor sickness nor death because *they* are blessings. All these things are but mediate and relative goods, not of any value or delightsomeness in themselves alone, but valuable as "working out in us the peaceable fruits of righteousness." They are the means to something better; the labor which we sell for gold, the stepping-stones to something higher and nobler in character and experience, that could not have been otherwise gained. A whipping is an evil, decidedly; but if a boy will not be thoughtful and obedient and good without, and can be made so with it, then the whipping is a good, most truly. That boy can afford to kiss the rod, even though it makes his back smart and ache, and makes the groans and tears come fast and free. It works out in him the peaceable fruits of righteousness. If they could have come without the whipping, that were better; but as they did not, then it was good to have it.

I met, not many months ago, a young man just released from the State prison of Wisconsin. In telling me of his experience as a convict, he said he blessed the day he was ever sent there, for he thought it had proved his salvation. The confinement, the work, the discipline, the shame, the opportunity to think, all brought him to his senses as perhaps nothing else could. Though at first his cell had seemed a perfect hell, it had rather been but a purifying purgatory that cleansed him for heaven.

And now (for space will not allow diffuseness) let me briefly indicate some of the benefits that come through trials. And first, I mention, as does the apostle,—

PATIENCE.

"My brethren," says James, "count it all joy when you fall into divers temptations, knowing that the trying of your faith worketh patience."

Says the apostle Paul, who certainly ought to know from a most thorough experience of his own, "We glory in tribulations also, knowing that tribulation worketh patience."

Now, I know no virtue, save the one all-comprehending virtue of love, that so crowns and ornaments a character as this one of patience. The ability to toil persistently, to endure cheerfully, to control the speech, to manage the senses, all this, and more, is true of the patient man. Patience is quiet, yet brave and bold. The patient man may say, as he looks trials in the face, "I am not afraid of what you may do to me. I have been through such experiences before, and, by the grace of God, I stood *and can again.*"

The good of trial, then, is, that it developes just this virtue. It must needs do it. The trials of home and family life, of school life, of business life, of church life, all surely exercise and draw out and make strong the grace of patience.

Another benefit from trials is their usefulness in the development of faculty, skill, resource, power, etc. There is great disadvantage in a too liberal nature. The most progressive and powerful nations and races are not those where the sun and the earth have been the kindest. Indeed, it is no paradox to say, that if we had all we want we should have almost nothing; but as we have so little, it is that we have so much.

We can not help but see that trials keep us from temptations and from sin. Ease and laziness provoke to lust. "Satan finds some mischief still for idle hands to do." When Jeshurun waxed fat, then he kicked. The ancient monks had a saying, that "a laborious monk was beset by only one devil, but an idle one by a legion." The rich and idle are put to many shifts "to kill time;" the busy and the needy can not find time enough. Many a young person might have been a blessing to the world had the necessity to work been laid upon him; but having no need to labor for self, he would not labor for others. Necessity might have been for him not only the mother of invention, but the guide to all usefulness, and perhaps, in time, to self-sacrifice; but without her, his life went to waste and shame.

Trials are blessings, in that they develop sympathy with others. They produce, as already shown, the ability to help, and no less certainly the spirit of helpfulness. He who has suffered, is generally glad to help another similar sufferer with his experience. Let us not forget, that in this way lies the divine method of training, nor with rebellion and useless repining strive to thwart God's plans for us. Thus it is that God brings human souls to perfection. And, given such creatures as we are, I see no other way possible. What God wants, looks for in us, and is ever trying to develop, is grace—actual goodness that can be seen and felt and understood. He wants no spurious transcendentalism, no fanaticism, nor mysticism, nor asceticism, but goodness, righteousness, true love to him and men, that shows itself in heart and word and act. And grace is not manufactured for us, nor grafted or infused into us, but is developed from what is in us already. God can not make us holy, save through the use of means, and in connection with our own willing and acting. We may pray for grace, but we shall get it through trial and discipline, and by all the ways which Providence (who is God) may lead us. * * * "I beseech you therefore, brethren, by the mercies of God, that ye present your bodies as living sacrifices." Let God have his way with you until you can say, as did Paul, from your own experience, "These light afflictions, which are but for a moment, shall work out for us a far more exceeding and eternal weight of glory." Rest in him until you can say that you are "persuaded that neither death, nor life, nor angels, nor principalities, nor powers, nor things present, nor things to come, nor height, nor depth, nor any other creature, shall be able to separate us from the love of God which is in Christ Jesus our Lord." "Nay, in all these things we are more than conquerors through him that hath loved us."

Now, dear friends, to bring this practical sermon right down to us, let me ask if there is one among you who has ever asked himself the question, Is it right, and does God wish, that I should have so much trouble? It is right, just as you have been conducting yourself, but it is not right, as you *might* conduct yourself. The trouble, is the medicine that will do you good, and if you take it as something administered by the hand of your kindest friend, it will cure the trouble. By saying it will cure the trouble, I do not mean that the cause of it will necessarily be removed; it may be just there yet, but you may have grace to "count it all joy," etc.

Now in regard to unkind and unjust treatment that you may meet in this world. Can we count it all joy when we are unfairly persecuted? I think we can, in two ways. It is going to make us better, and we will have the joy of showing our strength by becoming weak. If power is in our hands, we can show our Savior and the world that we can hold power and yet not use it. A man succeeded in business, and some, perhaps out of enmity, started false stories about his finances. He talked back, and a long wrangle ensued. A friend asked why he took the time and pains to reply at all, when he had so much that needed his hands and brains.

"And shall I not even assure my friends that these reports so many of them are asking about are not true?"

"Yes: but do not mention your maligners at all. Answer, in a general way, that you have no bills in the world that are not paid as soon as due, and then be sure this is kept true, to the very letter."

See—

> Behold, I send you forth as sheep in the midst of wolves; be ye therefore wise as serpents, and harmless as doves. But beware of men: for they will deliver you up to the councils, and they will scourge you in their synagogues; and ye shall be brought before governors and kings for my sake, for a testimony against them and the Gentiles. But when they deliver you up, take no thought how or what ye shall speak: for it shall be given you in that same hour what ye shall speak.—MATT. 10:16-19.

You are not to study up a long and labored answer to your enemies. You are not to study at all; in fact, you are to "take no thought how or what ye shall speak," for God's truth can always be told in very few words.

> In the multitude of words there wanteth not sin; but he that refraineth his lips is wise.—PROV. 10:19.

TOBACCO COLUMN.

I WANT one of the 50c smokers so much praised of late. I don't think it hardly fair to say, "If you don't send me one I will commence smoking again." I left off about two and a half years ago, before I knew you were going to pay for it.

DR. C. H. SMITH.

Ellaville, Schley Co., Ga., Sept. 6, 1881.

Inclosed find stamps for one of Clark's smokers. As it is now over 30 years since I quit the use of tobacco, which I had been an inveterate user of for 25 years, I suppose I quit too long ago to entitle me to the smoker. My advice to all users of the "vile weed" is, to *quit* and *stay quit*, whether they get a smoker or not.

O. O. SPENCER.

Lake Worth, Dade Co., Fla., Aug. 18, 1881.

Put me down with your little army who have quit the habit of smoking tobacco; but as I have already bought my smokers and paid for them (herewith inclosed), you can not accuse me of bad intentions in getting you to pay me for doing my duty to myself and family. I also got a young man ("first-rate fellow") to quit at the same time.

Not for publication. H. F. B.

May God bless you, friend B., for helping so much; and as I am sure your letter, as given above, will help more, I have taken the liberty to use it, notwithstanding your parting injunction, by omitting all but initials. We must let our light shine, and not hide it under a bushel.

GAMBLING IN FARM PRODUCTS.

I PRESUME our readers, in common with the rest of mankind, have been touched with the temptation to speculate, since the recent high prices of wheat, etc. Don't do it! don't do it. If you gain, you are harmed; and if you lose, you are harmed. The greater harm will probably come if you should chance to be among the few who gain, for it will unfit you, and spoil your relish and enjoyment for all honest, fair, and square day's work It is only one of the many ways the evil one has of getting good men away from their own good honest work. I can most heartily emphasize the following from the *American Agriculturist*, especially the item about selling your crops, getting the money, and paying up debts. It is the same with honey. Sell when you can get a fair price; *get the money*, and pay up debts, if you have any.

THE GREAT GRAIN SPECULATION, OR "CRAZE," OF 1881.

Never before in this country, or in any other, has there been any thing at all comparable to the present speculation, rather "gambling," in wheat, corn, and oats, and in hog products. This gambling spirit has taken possession of large masses of people, and extends from the great dealers who handle or bet on tens of millions of bushels, down through all ranks, to the hotel-waiter who puts up his week's wages as a "margin" on the purchase of a single hundred bushels.

So great is the present rage of this kind of speculation, that on some days sales reach tens of millions of bushels. On one day (Oct. 1) the "deliveries" of grain, on previous contracts, were reported at 32,000,000 bushels in Chicago alone!

This speculation has demoralized the whole trade. The "bulls" have run up prices so high as to nearly stop exports. On Oct. 1, the "visible supply" of wheat (that is, wheat in the elevators and storehouses, and in transit) amounted to 41,203,648 bushels. Last year at the same there were only 37,099,745 bushels, showing more available wheat now than one year ago, though prices are fully 40 per cent higher. Nearly the same of corn, the "visible supply" being near 27,649,173 bushels; last year, 28,289,298 bushels.

The increased price, produced largely by speculation, is beneficial to all those producers able to get their grain to market while these high rates prevail. But it is deranging almost all other business very greatly. Money is drawn in immense sums from the banks, and from all other legitimate business, to supply the "margins," or to carry the stocks actually purchased and held by speculators.

Exporting being at a standstill, the inflow of foreign money we should have is nearly stopped, and European buyers are seeking cheaper supplies in all other parts of the world.

The high speculative prices are greatly diminishing the consumption, and this alone must, ere long, bring about a decline. The laboring classes are compelled to pay much higher rates for their daily food, the advances mainly going into the hands of the speculators. Labor must therefore advance, and this in turn increases the cost of manufactures and of all products of labor.

Of course, every speculator, large and small, *expects* to sell out before any great decline shall come, and the shrewder ones will do so, leaving the great mass to bear the brunt of the loss.

Clear-headed business men now greatly fear that in the future, perhaps the very near future, a crash will come that will derange the whole business of the country.

To the oft-repeated question from our readers, "Shall we sell now, or hold on?" we can only answer, that a good general rule is to sell whenever ready; get the money; pay up debts, and keep in as snug and safe a condition as possible. To sell, or hold on for change of prices, is to speculate on great uncertainty. One-half of the speculators who make a business of studying the prospects—viz., the sellers for future delivery—believe prices will fall. The other half of them—the buyers—believe grain, etc., will go higher, from natural causes, or that they can "corner" the supplies, and put up the rates. The outlook would seem to be that, while speculative influences may sustain or even advance prices temporarily, there can hardly be a demand for all the grain, etc. Consumers, both at home and abroad, will necessarily curtail their purchases very materially, and these high rates will call out supplies from other sources not usually drawn upon.

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, NOV. 1, 1881.

Let no man deceive you with vain words; for because of these things cometh the wrath of God upon the children of disobedience.—EPHESIANS 5: 6.

◆

AFTER this date, the Simplicity smokers will be sold at the same price as the new Clark.

WE have to-day, October 28th, 4,472 subscribers. One more month, and then comes the annual tumble in our subscription list.

BY our new price list, dated Nov. 1st, you will see that we have advanced the price of queens for November one-fourth. This is chiefly on account of the greater risk in shipping in colder weather.

BASSWOOD-TREES.

OUR friends will observe we have taken the above trees out of our price list. The reason is, that the supply in our neighboring forests is exhausted. We are just now thinking of starting a basswood nursery.

THE comb honey we are selling in our lunch room cost us 21 cts., and we are selling it for 24. It is not in 1-lb. sections, either. If it was, it would cost us more money still. Have bee-keepers any thing to complain of in the way of prices?

IF you don't want your bees to raise any brood until next April, why just take away their queens, and buy some more when you want them, of the friends South. This is my invention, and I hereby give notice, that nobody is to get it patented, or sell it as a secret.

PLEASE, friends, do not take it for granted, when you do not see your articles or reports in the very next journal, that I do not think them worthy of notice. It takes time to get around to these things, and a pretty good heap of matter is almost always waiting for consideration.

FRIEND D. A. JONES sends out a very pretty circular and price list, and gives in it, gratis, his method of wintering bees; also some interesting matter about his new races of bees. As we are much interested in friend Jones's experiments and ventures, I presume every one will want it.

DO not be in haste to decide a colony is queenless this month, even if you do not find eggs or brood. Unless you have been feeding regularly, it would be singular if you did. Neither is it to be wondered at, if you do not find the queen readily, for she will be about as small as a worker, and get about much more lively than at other seasons of the year.

THE communication from Mr. Rose, on page 568, was somewhat shortened. After it was printed, he wrote, asking to have it inserted entire or not at all. Will the friends please so state it, when the article is sent in, where they wish it used without pruning, or not at all?

FRIEND VALENTINE asked me if I would not like a nucleus of his Albinos. Thinking he meant to make me a present of them, I replied in the affirmative. Some time afterward I discovered my mistake, and paid him for them, as a matter of course. It was simply a misunderstanding, and no blame attaches to either of us, so far as I can see.

A CONUNDRUM ON RIGHT AND WRONG.

A QUEEN reached a customer's postoffice one night, but before morning the postoffice, queen, and all, burned up. In our price list we agree to deliver safely at nearest post or express office. The postmaster says he saw the cage when it was taken from the mail-bag, but can't say whether the bees were in good order or not. Who should bear the loss, myself or my customer?

CATALOGUES AND PRICE LISTS FOR 1882.

PART SECOND of Our Homes is now completed, and will be ready to mail in a week or ten days; and to keep our friend M., the printer, busy, we have decided to print catalogues and circulars for bee-keepers, where wanted. For this purpose we will use any of the cuts found in our price list without extra charge. Write out the matter you wish in it, plainly, send along a sample of something that suits you, if you can, and we will give you an estimate without charge.

I PRESUME most of our readers remember the young man whom I have called "Fred," in the Home Papers; the one who came out of our jail, and afterward became quite active in the mission Sunday-school work. "Fred" has recently held quite an important position on our railroad, and was being rapidly promoted; but within a few days he was killed by an accident, not far from our place of business. One of his companions, in telling me of the accident, summed it all up in these words, "Fred was ready to die."

BEE CANDY.

IF you are too late with your feeding to feed liquid food, give them candy made of pure granulated sugar. It is a very easy matter to make it by the directions given in the A B C; but if you insist on having us do it, we can furnish it in frames, trays, or bricks, for 15c per lb. It won't pay to order it by express or mail; neither will it pay by freight, unless you order 25 lbs. or over, or have it sent with other goods. Unless your time is valuable, it will pay you best to get the sugar at the groceries, and make it yourself. At this date we can sell you granulated sugar by the barrel, shipped from New York, for 10½ cents.

A BIG SWINDLE.

LAST spring a visitor purchased some hybrid queens we had received from some of our many customers, and now he reports that one of them was a tested queen whose bees have, during the past summer, given him over a hundred lbs. of honey. Now, who of you is it that has been selling us pure queens for hybrids? I do not know how you will avoid such a grievous (?) disappointment, unless you buy dollar queens, take your chances, and do the testing yourself. (*Another* friend says *he* bought a hybrid of us that proved pure.) This same friend lives near a basswood belt that was produced by basswoods springing up where a hurricane blew down all the other trees, about 40 years ago. He got 18 lbs. of basswood from one colony in one day.

PROF. COOK, in his happy way, gets off the following:—

DON'T FORGET IT.

The 14th annual meeting of the Michigan Bee-Keepers' Association will be held at Battle Creek, on the Michigan Central R. R., Dec. 8th, 1881. D. A. Jones, C. F. Muth, O. O. Poppleton, A. I. Root, and T. F. Newman, have all promised to be present, if possible, and we have all learned that, with these men, almost any thing is possible. Mr. Jones will tell us of the "new bees," which we have received only as the result of his wondrous energy and enterprise. C. F. Muth and T. G. Newman, who have done so much to develop the honey market, will give us from their valuable store-house. The former will tell us all about foul brood — a most important subject to Michigan apiarists. No one in the U. S. is more competent. O. O. Poppleton, one of the Doolittles of the West, will speak of chaff hives, and tell us how to winter safely. A. I. Root, the apiarian "Jack of all trades," will meet and be met by a host of friends. From our own State we expect to hear from such men as J. Heddon, J. H. Townley, and W. Z. Hutchinson. The president will also give his address. Subject, "Crumbs from the Table of the National Convention." Come one, come all.

A. J. COOK, Pres.
T. F. BINGHAM, Sec.

THE principal fault that has developed with the 50-cent smoker is that, when very hot, it sometimes draws sparks into the blast-tube, and burns the bellows. It also blows sparks into the hive at times, in common with all other smokers that I know of. Well, this defect has been remedied by a circular piece of perforated tin, pushed in just forward of the screws, near the blast-tube. This completely remedies both troubles, but after a while it gets stopped up with soot. To clear it from this, push it out and bend it until the soot cracks off, then put it back. We will mail these circular pieces of perforated tin (to any one who has bought one of the 50-cent smokers), free of charge. Just say on a postal, you want one. Some one has said that vinegar will take the gummy matter from a smoker-tube instantly. To make this smoker *direct draft*, when starting the fire just place your finger over the nozzle, and it is done instantly.

HONEY PLANTS IN OCTOBER AND NOVEMBER.

A YEAR ago I did my level best to raise Simpson honey-plants in the fall, even to carrying water dura dry time, to water the seed-bed. Well, this year I planted potatoes in a sandy spot, down by the pond. I did not get many potatoes, but I have got a most beautiful plot of Simpson plants. The seeds blew over from the large patch, and the sandy ground just suited it. To-day, October 27th, the plants are about two feet high, and humming with the bees, although we have had several pretty severe frosts. The fresh, bright, thrifty green (in spite of a sharp frost last night), rests me when I go down among them, more than I can tell. They cover the ground so thickly I shall have lots of roots to sell you in the spring; and a good thrifty root that has wintered over will stand a thousand miles of mail bags, almost as well as a potato. Of course, the old plants are all dry now, but it is easy to manage so we can have a yield of honey in October, and perhaps November. It is only the *young* plants that blossom in the fall so late. Next year they will bloom in August, and give their greatest yield, and be done by October. The year after, they will do nearly the same; but like the strawberry, after two full crops they do but little, and we must start with new plants again. The Spider plant does not stand as much frost as the Simpson.

I AM inclined to think friend Heddon puts it a little strongly when he says, on page 543, "And now the favorite chaff packing and cushions are being condemned, even when they are to be left out." Reports in regard to chaff packing have been so favorable that we are having more orders for chaff hives than we have ever had any previous fall, by far; but I think friend Heddon is right in saying the chaff cushions we have been using do not afford ventilation enough for winters like the last. As to just how this more ventilation shall be given, I confess I can not exactly say, but I feel sure we need the chaff packing at the sides of the hive. Auger-holes through the honey-board, with a tight cap placed over, have done so well throughout the country around here, even during the past hard winter, that I know it answers very well, and I am now inclined to think, a 2-inch hole through a close-fitting wood mat, into a shallow chamber under the chaff cushion, would give about the same results. Friend Muth's straw mat would, without question, amount to the same thing virtually; and, by the way, why is it we hear no more in regard to the straw mats which were so much in demand at one time? Does friend Muth still use them? and where is friend Nevins, who used to make them?

SENDING GLEANINGS WITHOUT ITS BEING ORDERED.

SEVERAL have scolded because we let GLEANINGS stop, while they had money in our possession, to their credit. Here is one:—

> Yours of 7th inst. is received I expected that you would continue to send me GLEANINGS, but perhaps you do not wish to do so; or, may be it is dead. I have received none since the June number. If you have no objection, please send it along till further orders. THOS. GALBRAITH.
>
> Tarentum, Allegheny Co., Pa., Oct. 10, 1881.

Now, friends, you are a little thoughtless. In the first place, how are we to know there is money to your credit, unless you say so? Again, would it be business-like to use that money for GLEANINGS, or any other purpose, unless you so directed? We have customers who do not take GLEANINGS, but still have money placed to their credit, in case they may need some little thing. Should we force GLEANINGS on them, without knowing whether they wanted it or not? With a great deal of labor we could examine every name as soon as the time expired, and see whether they had a credit on the ledger; but would we have a right, even then, to continue the journal without orders? If you do not want the bother of telling us to send it on, every year, just order it sent for 5 or 10 years, and we will give you the very best discount, and you will have no more bother, I assure you.

SOMETHING ON THE CREDIT SIDE OF HUMANITY.

MOST of you know something of the troubles we have had in collecting small amounts due us, in our business transactions all over the world. Well, during the month of October, when we have the leisure time to attend to it, it is our practice to send statements to all who have small credits, which have been left until they ordered something. Of course, you would think it a very easy thing to pay folks money, compared with the task of getting them to pay *you* money. But it isn't, after all. There are some whom we have notified year after year, and asked what were their wishes; but we can't get a reply. Writing to the postmaster to see if they are still there and living, don't always get a reply either. We have now balances standing to the credit of something like a thousand different persons; and to write each one is such a task we have had the following printed on a postal card, the blanks, of course, being filled out:—

> Friend . . . . . . , we find in going over our books, as is our custom toward the end of the year, a balance in your favor of $ . . . Now, if you wish this to remain standing until you need something, we are perfectly willing it should remain so as long as you wish: but lest you have forgotten it, we send you this card. If you think you shall not be needing any goods, or prefer the money, of course we will send it you at once. We enclose you our latest price list, and would invite your attention to our counter departments, where we make a specialty of Household Conveniences. If we hear nothing from you, we shall take it for granted you wish the amount to stand, and will hold same subject to your order. Thanking you for your past favors in the way of patronage, I remain, respectfully yours,
>
> Medina, O., Oct. 1, 1881. A. I. ROOT.

Do you wish to know the moral I am getting at in this little statement? It is, that habits of procrastination and neglect are more common sins than those of deliberate dishonesty. Men who are provokingly slow in paying small debts are about as slow in stirring themselves about money that is coming into their pockets, instead of going out. Although the sin is a grievous one, and clogs business, it is not as bad as a downright purpose of wrong, and therefore we should again have charity for even those who don't pay.

H. A. BURCH & CO.

I HAVE watched with careful interest your publications of late, relating to H. A. Burch & Co., of South Haven, Mich., and the manner in which, as you allege, their customers are being treated. Having been a reader of GLEANINGS for some little time, and never having sent a communication to your office, aside from my subscriptions, I am somewhat credulous to the belief that you will permit one who is simply in favor of having justice done by all, without reference to *pretensions*, position, creed, sex, or color, rich or poor, high or low, to occupy a small space in your publication, to state *squarely* what I *know*, letting the responsibility fall where it may. My orders placed with Messrs. Burch & Co., in 1880, were promptly filled. In May last I took occasion to place an order with them again, and the time stipulated when the goods were to be forwarded. The time arrived, and my order was not filled; in answer to my inquiry, they informed me every thing was being done possible to fill their orders, and they felt positive my order would be reached by a certain date, naming it. Failing to get my goods on the day appointed, and prejudiced by the reports contained in your pages, I visited South Haven, ostensibly for the purpose of commencing suit against Messrs. Burch & Co., for full amount of my order, with interest and damages. My first business was to visit a few of the oldest and best citizens in the place, to whom I stated the circumstances, who in turn informed me of the true character of Mr. H. A. Burch, whom they had known from boyhood, and said there must be something unnatural, and entirely different from the course pursued by him heretofore; giving as reason therefor, that H. A. Burch had ever enjoyed the enviable reputation of being an upright, honest, clear-headed, prompt, and persevering young man, and it could not be possible he had so fallen, from such a reputation, as to be unworthy of the estimation in which he was held, and advised me to visit him and consult all the circumstances attending the case before I proceeded against him. Upon visiting him, it required but a short time to take in the entire situation. First, I counted 243 colonies of bees in his apiary; Mr. Burch in the work, with a competent man with him (who, by the way, had just arrived), shipping off bees, extracting honey, hiving swarms, etc. I found Mr. B. was employed from sunrise until about 11 P.M., and doing every thing in his power to get his orders off. My feelings were softened, and suddenly changed, as the circumstances became apparent; and, seeing his dilemma, I took hold and spent two days with him as pleasantly as I ever passed the time in my life, aiding the man out of trouble as far as I could, who, but a few hours before, I was intending to cause trouble. In the assistance rendered, I felt as though I was doing by others as I would be done by. Having made other plans, Mr. B. paid me at once the amount sent with my order, and desired to pay me the amount of expenses to his place and return, which was refused by me. I returned to my home amply repaid for the trouble and expense I had experienced, satisfied that Messrs. Burch & Co. were being unjustly criticised by you, especially when I was informed the same explanation had been made to you that was made to me. Let any man read Mr. B.'s letter in September GLEANINGS as an explanation for any delay in filling orders; and if he has any charity for his fellow-man he will condemn every word you utter in your remarks at the close of his letter, and as cheerfully approve every word in the letter of Hon. James Heddon, contained in the same number. Mr. Heddon very ably gives *just* the reason why Mr. Burch has failed to please us all this year when he says, "Without great caution, as well as good judgment, one is very apt to far overestimate his ability to fill all these odd-sized and complicated orders with promptness." This letter of Brother Heddon's, followed by Mr. B.'s own explanation, should satisfy all: it would my own mind had I never visited the apiary of Mr. B.

In conclusion, permit me to state what I believe and honestly believe. First, Mr. B. will make good every dollar sent him, if let alone. No one will lose his money. I believe further, that the unwarranted pains taken by yourself, and Newman, of Chicago, to catch at every thing, and by reason of the position you both enjoy in controlling a printing-press to scatter broadcast throughout this land statements that you both should feel ashamed to utter against a fellow-creature in consequence of circumstances from which he is unable to extricate himself promptly, will redound to your own injury and to his credit. I know three men, prominent in their respective localities, one of them residing in New York, who recently informed me that the course taken by you two men in trying to drive to the wall Mr. Burch had convinced them that he was a man who *should* and *would* be sustained. I indorse their conclusions. When you ask your readers to indorse the slur cast at Mr. B. in the *Sentinel*, published at South Haven, as being the sentiment of his own townsmen, you are asking more than you are entitled to. Men of unapproachable character; men of honor and position; the best men in South Haven; men who have known him longer than this diminutive sheet has had existence, will contradict this statement, and tell you it is false. Such a course taken by a man of your pretensions, sooner or later becomes obnoxious to the masses. I can not believe you are practicing what you are constantly preaching.

Mr. Burch has filled orders from this and adjoining counties throughout the season, and the best of satisfaction has been given. On orders he could not fill at once, he has offered to return the money, and in some cases parties have recalled the money, which was returned promptly.

H. A. Burch & Co. know nothing of my wish to express myself in their behalf; they have never requested my assistance in any way, shape, or manner; but I desire that you should know, and every reader of your publication as well, that, unsolicted, I stand ready to help them; not by vainly offering to make good any one who may be defrauded by dishonest advertisers, but by speaking the simple truth every time; and should they need it, I am ready to loan them money sufficient to make all the amends necessary. DAVID E. ROSE.

Grand Haven, Mich., Oct. 3, 1881.

I am sure we are all very glad indeed to get the above favorable report in regard to Mr. Burch, and we can freely overlook the mistaken opinion friend Rose has in regard to the bee journals, after reading his concluding sentence. A friend in need is a friend indeed, and Mr. Rose promises to be a friend to us all. As many words seem only to engender strife, shall we not now have *deeds* instead?

The following have come in since our last:

I have written Burch & Co. several times for my $6.65. Their reply Oct. 6th was, "Will do so when we can; but the action of the bee journals has made it impossible for the present." G. K. HUBBARD.

LaGrange, Ind., Oct. 16, 1881.

I have received now my 3 queens from Burch & Co. I sent him the money in April.

H. M. MOYER.

Hill Church, Berks Co., Pa., Sept. 24, 1881.

The queen I ordered of Mr. Burch last May was received the 8th inst., which makes Mr. B. and myself square. A. M. SAWDEY.

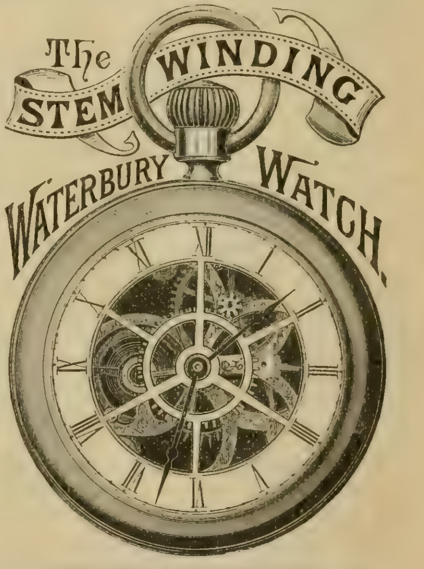
Poolville, N. Y., Oct. 19, 1881.

RECENT ADDITIONS, CHANGES, AND IMPROVEMENTS, IN OUR COUNTER STORE.

Now, after all our talk about green corn, during the past months, no one has as yet reported having any for sale. We sold all ours while in the green state, on the ear, except some of the choicest saved for seed. Who has any dried or evaporated Mammoth sweet corn (such as we sold the seed of), for sale now? and what is the price? I should be glad to purchase some.

THE WATERBURY WATCHES.

ONE of the firm of the Waterbury Watch Co. has just paid us a visit. Their new factory, which has just been finished at a cost of $300,000, is now turning out 500 watches per day, and can, if need be, increase the number to 1000. Up to date, 150,000 have been sold. The first watch was sold the 22d of Dec., 1879. They were burned out the following April, so that for several months no work was done at all. After the fire they worked in quarters much cramped for room, until last May. They employ about 200 hands now, a great part of them females. Their new factory will, however, admit of 400. After this reaches our friends, we shall be prepared to send out only the new improved cases, which are plain and smooth, as shown in the cut below, nickel all through, and will therefore never show brass like the old ones.



IMPROVED WATERBURY WATCH.

They are, also, all packed in a beautiful silk-lined mailing-case. Notwithstanding all these and some other great improvements, the price will still be the same. We have made an especial arrangement to get these watches for our subscribers, and can now give, as a premium, a watch to every one who sends us five subscribers at $1.00 each, or we will send GLEANINGS for one year, and a watch, to every one who sends us $4.00. If you have already sent us a dollar for GLEANINGS for 1882, asking for no other premium, you can have the watch for an even $3.00. Remember to send 18c for postage, packing and registering. It has been quite a problem to mail watches safely, but we can do it now *almost* every time.

WE have just received a very pretty opera glass, that we can sell for $3.00, instead of $5.00, the price of those in our list. They are of course, not quite as powerful as the higher priced ones, but still are very nearly as good for bee hunting.

HONEY-PAILS.

THE prices on tinware have advanced, so that we are obliged to make our 5c pails hold exactly 1 pint, instead of a pint and a half, as heretofore. They now hold exactly 1½ lbs. of extracted honey, and thus filled and labeled, they sell readily for an even 25c in our market.

A GOOD CLOCK FOR A DOLLAR.

I KNEW pretty well it would come, but I did not think we should get one so very pretty as the two we have. The smallest, called "Wee-wag," is in iron, and is finished to look exactly like black marble. It keeps time splendidly, and is a real beauty; but it is so heavy it can not go by mail for less than 50c. Each one is packed in a very neat wooden case. The other pattern is in a wooden case, with the door beautifully carved. Postage, 35c. The works are so simple in either, that there is but little chance of their getting out of order.

THREE-CENT COUNTER.

Postage.]		[Pr. of 10,	of 100
3	A B C Plates; tin; 6 in	20	1 75
	Berry Dish, glass	28	2 75
	Butter-Dishes, individual; glass	25	2 25
3	Cake-cutters, fancy, 6 different pat'ns	28	2 50
2	Court Plaster, to be kept in Drawer under Buzz Saw Table	28	2 50
5	Cups, ¼ pint	20	1 75
3	China Mugs	28	2 75
3	Glass Marbles, 1¼ in, *very handsome*	40	3 50
3	Glass Cutters	28	2 50
	Just such as have been selling from 25 to 50c each.		
2	Mustard Spoons, best boxwood	25	2 00
2	Needles, the *very best* I know of (2 papers for 5c)	23	2 50
6	Pans, Milk, toy, ½ pint, 2 for 5c. Excellent for nail boxes	25	2 00
3	Pail, toy, covered	25	2 25
3	Pepper Boxes, Japanned	25	2 25
2	Pie Crimpers, for cutting pie crusts	25	2 00
3	Pie Plates, 6 inch	25	2 25
	Just the thing for making "lunch" pies.		
3	Rattle Boxes, tin	25	2 00
2	Screw-drivers, Sewing Machine, Neat, Wood Handle, fine steel	25	2 00
2	Spoons, tea, tinned iron	20	1 75
2	Steel Watch-Chains; neatly polished	25	2 00
4	Toy Bank, Japanned House	28	2 75

FIVE-CENT COUNTER.

5	Bird-Cage Hooks; very handy	35	3 25
2	Clock cord, fine linen, 30 hour	33	3 00
5	Gents' Collars, Box of 10, any size	75	7 00
5	Glass Marbles, 1¾ in., very handsome	45	4 00
4	Pint Measures, tin, with lip; nice	48	4 50
5	Pie Lifters, very handy	40	3 50
5	Maple-sugar Candy; a beautiful confectionery; ¼-lb. pkg. for 5 cents	40	3 50
2	Tape Measure, Tailors'; leather	40	3 75

TEN-CENT COUNTER.

7	Brushes, Counter: good for the money	85	7 75
2	Clock-Cord, 30 hour: best linen	65	6 00
13	Dripping-Pans, tin, 10½x13	85	8 00
	Mason's Fruit-Jars	95	9 00
9	Pot-covers, tin, 12¼ in., hemmed and handled	75	7 00
5	Wire Skimmers; *well made*, very useful	80	7 50

FIFTEEN-CENT COUNTER.

18	Glue, 1 pound	1 30	12 00
	For making cheirographs, or carpenter's use; an excellent article.		
2	Pocket-Compass, in brass case	1 40	13 00
	A most useful thing when traveling in the woods; well-made.		

Twenty-Five Cent Counter.

4	Carpenter's Dividers, with wing	2 25	20 00
21	Steamers, tin, 9 in., nice and useful	2 00	18 00
24	Soldering iron (or coppers) ½ lb.	2 00	18 00

Thirty-Five Cent Counter.

34	Dish, or Rinsing-pan, 16 in	3 45	34 00
	Stamped of a single piece of tin, 16 inches across; 17 quarts, and a most handy utensil in the kitchen.		
21	Pail, Milk, with Strainer attached	3 00	25 00
30	Pail, Covered, 6 qt., for cream	3 00	25 00
31	Soldering iron (or copper) 1 lb	3 00	25 00
33	Steamers, like 25c one, but larger	3 00	25 00

FIFTY-CENT COUNTER.

3	Cutting-Plyers; 3½ inch	4 00	35 00
	Polished steel; a beautiful tool.		
32	Dish or rinsing pan, *re-tinned*	4 50	40 00
	17 inches across, 19 quarts. (See 35c counter.)		
	Trunks, very good, 11x12x24	4 50	40 00
	The above will do nicely to pack goods in when you make an order. They are splendid trunks for the money.		

Seventy-Five Cent Counter.

42	Dish or rinsing pan, *re-tinned*	7 00	65 00
	19 inches across; 21 qts. (See 35c counter.)		
	Trunks, very good, 13x15x28	7 00	65 00
	See 50 cent counter.		

ONE-DOLLAR COUNTER.

	Trunks, very good, 15x16x32	9 00	85 00
	See 50 cent counter.		

A. I. ROOT, Medina, Ohio.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

NEW YORK.—*Honey.*—Permit us to quote comb honey as follows: Best white in 1 lb. sections, 20@22c; fair, 17@19c; best white in 2 lb. sections, 18@20c; fair, 15@17c; best dark, in 1 lb. sections, 13@15c; best dark in 2 lb. sections, 11@14c. Large boxes, 2c per lb. less than above. Best white extracted, 10@12c; best dark, 7@8c.

Beeswax.—Market is quiet; prime yellow is selling at 22@24c; dark wax, 20@21c.

H. K. & F. B. THURBER & CO.

New York, Oct. 22, 1881.

ST. LOUIS.—*Honey.*—In fair demand and steady. Comb 18@20c; pure strained and extracted at 9@12½c—outside figures for lots in choice small pkgs. Sale 12 brls and 9 hf-brls strained at 9c.

St. Louis, Mo., Oct. 25, 1881. R. C. GREER & CO.

CHICAGO.—*Honey.*—The condition of the honey and wax market remains about the same as last quotation. The demand is good, and the supply is equal to it. ALFRED H. NEWMAN.

972 West Madison St., Chicago, Oct. 24, 1881.

CLEVELAND.—*Honey.*—Choice white section honey continues in good request at 21c for 1-lb. and 20 for 2-lb. sections, all receipts being readily placed at these prices. Extracted continues very dull at 11@12c. *Beeswax.*—20@22. A. C. KENDEL.

Cleveland, Ohio, Oct. 21, 1881.

DETROIT.—*Honey.*—The market is firm, and the demand for a good article is steady at 17 @ 19 cents.

Beeswax—20 @ 22. A. B. WEED.

Detroit, Oct. 26, 1881.

I have 9 barrels of extracted honey, 7 of light, and 2 of dark; the barrels hold about 360 lbs. each. Will sell the dark for 8c per lb., and the light for 10c, delivered at depot here, if sold soon.

Union City, Branch Co., Mich. F. R. JOHNSON.

You may set me down 8000 lbs. of comb honey, in single-comb boxes, in cases glassed on one side, 16 in. square, and containing 14 and 21 sections to case. Cases average 27 lbs.

Jeffersonville, Wayne Co., Ill. T. C. STANLEY.

The North-Eastern Bee Association of Maine will hold their next regular meeting at Grange Hall, Dexter, Nov. 10, 1881. All bee-keepers are invited to attend. WM. HOYT, Sec'y.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or $2,00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or $2,00 per year.

Those whose names appear below agree to furnish Italian queens for $1,00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for $1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

*E. W. Hale, Newark, Wirt Co., W. Va.	2-1
*A. I. Root, Medina, Ohio.	
*H. H. Brown, Light Street, Columbia Co., Pa.	7tf
*E. M. Hayhurst, Kansas City, Mo.	1-12
*Paul L. Viallon, Bayou Goula, La.	7tfd
*D. A. McCord, Oxford, Butler Co., O.	1-12
*S. F. Newman, Norwalk, Huron Co., O.	7tfd
*Wm. Ballantine, Sago, Musk. Co., O.	7tfd
*T. W. Dougherty, Mt. Vernon, Posey Co., Ind.	7-12
C. H. Deane, Sr., Mortonsville, Woodford Co., Ky.	8tfd

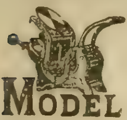
Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.	
P. L. Viallon, Bayou Goula, Iberville Par., La.	1tfd
S. F. Newman, Norwalk, Huron Co., O.	1tfd
J. F. Hart, Union Point, Greene Co., Ga.	4-3

FOR SALE!

As I am about to change my location for one near the city, I offer for sale, in bulk or lots, 14 L. hives, hinged covers, well finished, some of them used but a few months. Also one Muth Extractor, used but one season. All in good order. Price for the whole, $35.00. Address, MRS. DR. GILLESPIE,
12d West Elizabeth, Allegheny Co., Pa.



FOR durability, ease of management, beauty and rapidity of work, and low price, our Printing-press can not be excelled. For terms, address S. D. RUTHERFORD,
Kearneysville,
12 West Virginia,

CHAFF AND SIMPLICITY HIVES.

Perfect machinery for turning out first-class work, and as cheap as such can be done. Orders received by first of January, at special rates. Write for prices—no circulars. C. A. GRAVES,
12 Birmingham, Erie Co., Ohio.

A BEE-KEEPER WANTED.

Must be experienced and reliable. No person using intoxicating liquors, tobacco, or cigars, need apply. A married man preferred. Must be industrious. Address DR. ISAAC EDWARDS,
12tfd Omaha, Nebraska.

WANTED. — *Bee-Keeper*, and *Student*. Bee-Keeper must be experienced, and thoroughly reliable. No person using tobacco or liquors need apply. Address DOCTOR E. NUGENT,
12 Linden Apiary, Strathroy, Ontario, Canada.

HONEY PLANTS!

BLACK LOCUST.—Splendid for honey, and will pay alone for posts. Price $1. per 100; seed 25 cents per ounce.

SOURWOOD.—Always produces a large yield of honey. Price of young trees, $3 50 per 100.

BUCKBUSH.—An ornamental shrub for the yard. Begins to bloom when all else fails with us, and continues about two months. Very hardy, and produces a great deal of honey. Price $2.00 per 100; seed 50 cents per ounce.

BUCKTHORN.—This is one of our best honey-plants; yields honey abundantly. Price 50 cts. per 100; seed 25 cts. per ounce.

POPLAR.—This certainly yielded more honey the past season than any thing else in this vicinity. Valuable for timber; unsurpassed as a shade tree; nice, straight young trees at $1.00 per 100.

PERSIMMON.—Blooms sometimes for nearly a month, yielding an abundance of honey, and the fruit is just splendid (for those who like it). Price of young trees, $5.00 per 100; seed, 10 cts. per oz.

SUMAC.—Blooms in the summer, when there is but little else; would be considered very ornamental where it does not grow wild; grows from 4 to 6 ft. high. Young trees, $2. per 100; seed, 25 cts. per oz.

CHERRY, BLACK TARTARIAN.—Good for honey and fruit; very hardy. Price $2.00 per 100.

GOOSEBERRY.—Bees work on it lively; splendid fruit. Price $2.00 per 100 by mail, postpaid.

APPLE-TWIGS for grafting; almost any variety; 25 cts. per bunch by mail, postpaid.

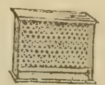
The above trees delivered on board cars here at prices named; seeds sent by mail postpaid.

Address CHAS. KINGSLEY,
12d Greeneville, Greene Co., Tenn.

The Oldest Bee Paper in America--Established in 1861.

AMERICAN BEE JOURNAL,

Published **WEEKLY**, at **$2.00** a year.
The first and third numbers of each month, **$1.00** a year.
The first number of each month, **50** cents a year.
THOMAS G. NEWMAN, Editor and Proprietor,
974 West Madison Street, **Chicago, Ill.**



FLAT-BOTTOM COMB FOUNDATION.—High side-walls, 4 to 14 square feet to the lb. Circular and samples free. J. VAN DEUSEN & SONS,
12tf fdn Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

HEADQUARTERS FOR

Early Italian & Cyprian Queens.

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new circular. Address
1tfd DR. J. P. H. BROWN, Augusta, Ga.

HIVES! HIVES!

I am now prepared to manufacture bee-hives, wholesale and retail at the very lowest prices. Send one dollar, to get one of D. A. Jones' celebrated hives. Catalogue furnished on application.
9tfd JOHN M. KINZIE, Doon, Ont., Can.

THE

British Bee Journal.

The British Bee Journal is now mailed to our address in packages, each month. In order to dispose of them, we offer them at present at 75c per year, postage paid, beginning Jan. 1881, if ordered so they can be *mailed in December*, 1881, on account of postage. A. I. ROOT, Medina, Ohio.

FREE! A sample copy of the NEW ENGLAND BEE JOURNAL. H. POOLE, Mechanic Falls, Me.

TAKE THE BEST
25c. SMALL FRUIT INSTRUCTOR
CATALOGUE FREE
Purdy of Palmyra NY
FRUIT RECORDER & COTTAGE GARDENER
$100 PR YEAR
SPECIMENS FREE

Splendid new Catalogue of Trees. Plants, Seeds, new Grapes and Small Fruits, **free.** Specimen copy of **the best** Fruit and Flower Paper published, **free.** Extra inducements to Club Agents and those desiring to sell our Plants. Our 64-page **Small Fruit Instructor** (new edition) tells how to plant, grow and market; post-paid. 25c. Address, **PURDY, of Palmyra, N.Y.**

NOTICE!

As the March, 1879, number of GLEANINGS is now out of print, we will pay 15c for the same. Put your name and address on one end of the wrapper, and drop us a postal of instructions.

A. I. ROOT, Medina, Ohio.

KIND WORDS FROM OUR CUSTOMERS.

When I first sent for your book I thought I would try it a short time, not thinking I would like it as well as I do. H. W. COOK.
Atherton, Can., Nov. 7, 1881.

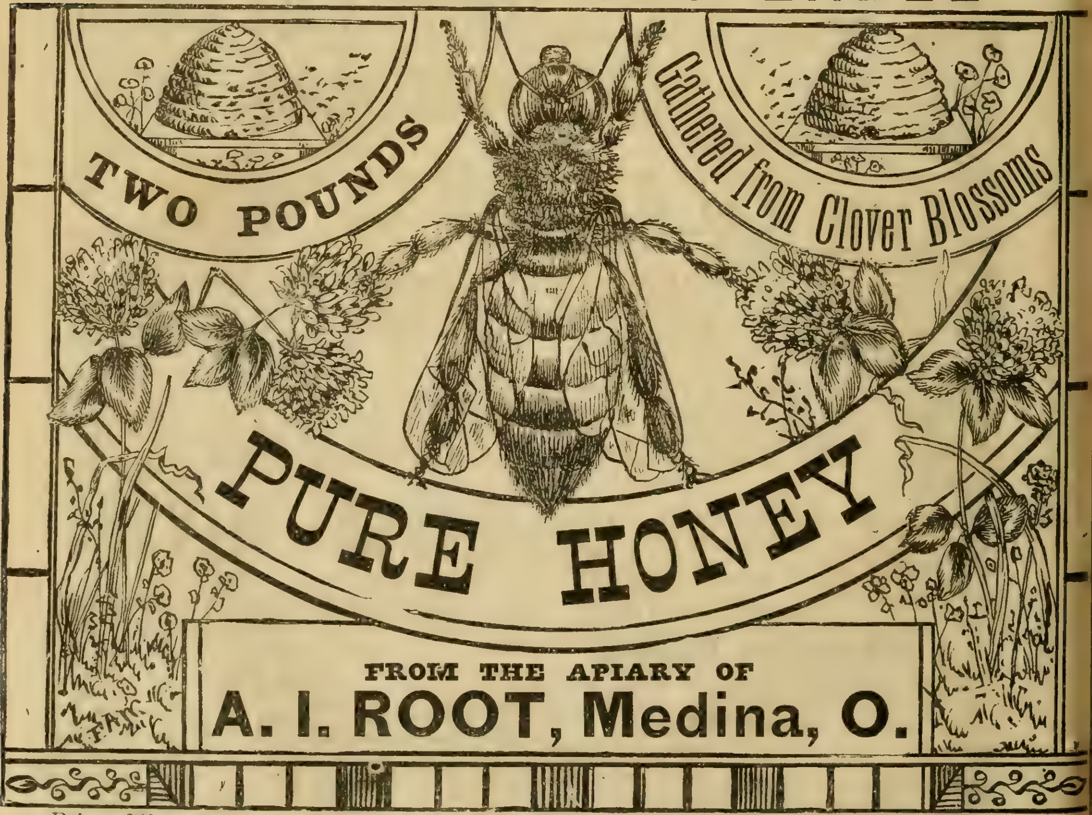
The "Favorite" scales bought of you recently are very nice and reliable, and give entire satisfaction. Every housewife should have one in her kitchen.
J. A. BOOKWALTER.
Wabash, Ind., Nov. 7, 1881.

The Clark smoker came all right. I have tried it, and consider it a vast improvement over the one I have been using. Please accept many thanks for promptness, and kindness in making the change.
D. C. POTTER.
Fairhaven, Bristol Co., Mass., Nov. 6, 1881.

A B C book and GLEANINGS are at hand, and indeed they were welcome. I think each A B C scholar ought to have both copies, for they are very brief, and instructive to both veteran and amateur apiarist. Thanking you for your promptness, I remain yours,— A. F. WHITE.
Smithville Sta., Wayne Co., O., Nov. 12, 1881.

Inclosed find 53 cts., for which please send me as many charm knives as you can for the money, and pay postage on them. I got one for my daughter, fifteen years old, and the schoolgirls where she is going to school want some. Please send some of them with pearl handles. MRS. S. A. CONWAY.
Helena, Karnes Co., Texas.

OUR NEW HONEY LABEL


TWO POUNDS
Gathered from Clover Blossoms
PURE HONEY
FROM THE APIARY OF
A. I. ROOT, Medina, O.

Price of these labels with the spaces left blank, 25c per hundred, or $2.25 per thousand;
ple, for 50c per 100, or $1.25 per 1000 more. The label may be either red, green, blue, or

The 15-cent dictionary came to hand all right, and I declare it is quite a prize for the money. I showed it to my teacher, and asked him what he thought it ought to be worth. He replied that he thought such a book would cost 40 or 50 cents. ISABELLA WIER.
South River, Anne Arundel Co., Md., Nov. 18, 1881.

I write to acknowledge the receipt of your bee book, with which I am highly pleased. I gave the letter containing the order to the clerk to mail on Monday morning, eight o'clock, and Wednesday evening before my little boy went to bed, I was showing him the picture of Novice and little Blue Eyes. I think that an instance of promptness rarely equaled. W. H. WRIGHT.
Edmore, Mich., Oct. 24, 1881.

I have one of the Waterbury watches, and think it keeps good time. It keeps within a minute or two, and sometimes within a half-minute a week. The honey season has been extra poor around here; rain, rain, all the time. I increased from three to seven, and have been feeding them up for winter. I shall try a snow-bank this year.
CHAS. O. MELOON.
Portsmouth, N. H., Oct. 26, 1881.

The Clark smoker works very satisfactorily: indeed, more so than the Bingham I had been using all along, and for which I had to pay one dollar. I should think as soon as bee-keepers of this country (and Europe too) will have become apprised of the fact, that for 50 cents they can buy the most servicable smoker, they will not use any other.
LOUIS KNORR, M. D.
Savannah, Ga., Aug. 8, 1881.

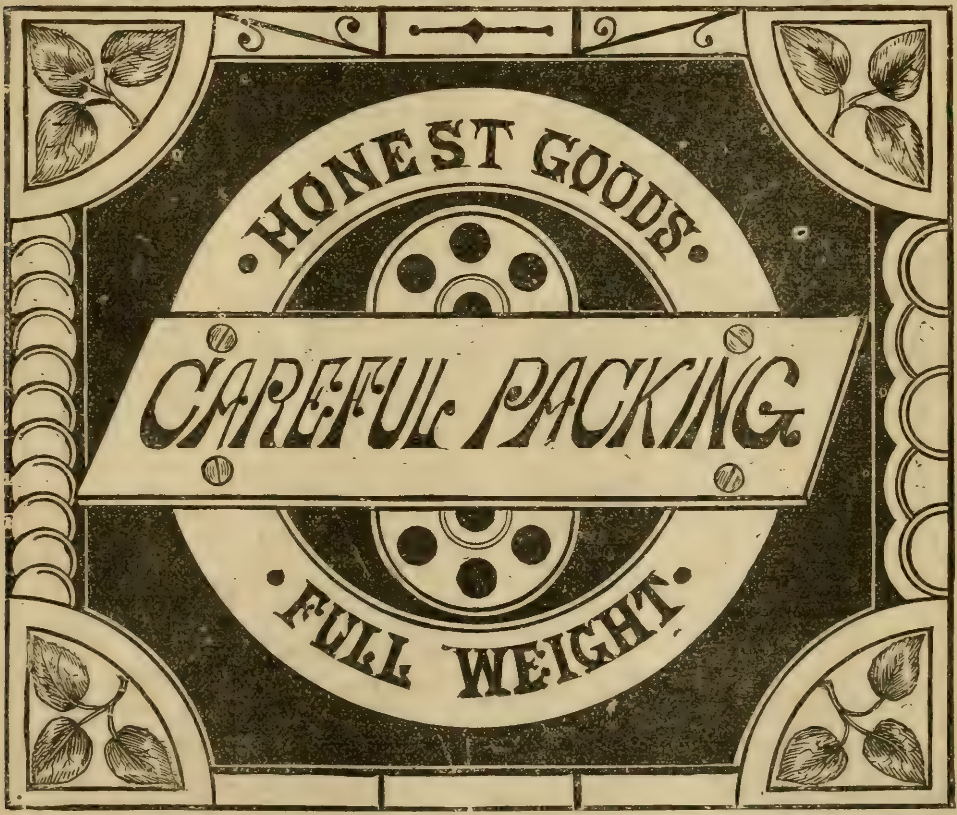
The queen came last evening in splendid condition — only one bee dead in the cage. I have just introduced her this forenoon, and hope she will be graciously received. I like to see such promptness in business matters; it is satisfactory to deal with men of your stamp. T. BOLES.
Ridgeway, Ont., Can., Nov. 2, 1881.

I have the A B C book, which has been a great help to me. I paid you $1 25 for it, and if I could not get another I would not take five times that amount for it. I have learned more about handling bees since I have had it than I ever knew about bees before in my life. JAMES K. GREGORY.
Crooked Lake, Wyoming Co., Pa., Oct. 28, 1881.

That "tested queen and 1 lb. of bees" sent me last April did well. I let them go on 3 L. frames containing comb and some honey; added other frames as needed, and soon had to put on the upper story. Her "highness" was crowded out below, and just walked into the upper parlor and filled it nearly full. I took solid comfort with them. The bees are large, yellow, beautiful, and kind.
Columbus, O., Oct. 28, 1881. R. G. WARNER.

The Waterbury watch and the A B C were received the 28th. They were very nicely packed, and came safely. Husband was quite disappointed in the watch — it being much better than he expected. I think we shall order one or two dozen in the course of a few weeks. The A B C is worth $10, at least to me, as I have just bought a large colony of Italians, and knew nothing whatever of bees or bee-keeping.
IMOGENE DONNELLY.
Omer, Bay Co., Mich., Nov. 1, 1881.

FOR TWO-POUND CANS.



if wanted by mail, add 5c per 100. Address and source of honey printed in like this sam-
black. Two colors at once, one-half more. Address A. I. ROOT, Medina, Ohio.

A KIND LETTER.

We must have Gleanings for another year. Also send sample copies as follows, to * * * * The last is our minister of the Church of Christ at this place. He is a worthy man. I love him much. If you still have some of the cards against swearing, send me 25 or 50. I can use them. I will give them to those I think they will benefit. I am superintendant of the Bible-reading class of our town. It is an interesting study. I was once an unbeliever, yea, an infidel of the vilest type; but I now believe. Pray for me that I may be humble. Your kind words have done me much good. God speed you, my dear friend! I once used tobacco; quit its use Jan. 26, 1880, and have never touched it since. I use no alcoholic drinks, and, my dear sir, I do not prescribe them in my practice. You are right in fighting these pernicious poisons; and for one I will be your co-worker. We *must* pray, and read God's word if we desire to overcome sin and temptation. 'Tis the only way.

My bees are doing finely now. Honey crop good; only few bees kept here, however. I have much to thank you for more than you can ever know. Bee-keeping has made me a much better man. I do not know why. Your brother in Christ,

J. E. Lay, M. D.

Hallettsville, Lavaca Co., Tex., Oct. 27, 1881.

RECENT ADDITIONS, CHANGES, AND IMPROVEMENTS, IN OUR COUNTER STORE.

Our paper collars were by mistake put on the 5-cent counter last month. If you will note the prices per tens and hundreds, it will be plain that it was out of place.

"Charley," our painter and varnisher, has just got up something new for honey-cases. On the sheet of glass forming one side of the case he has put in bronze lettering, similar to that on our honey-extractors, "Honey for Sale." As the bronze letters are on the back side of the glass, they are always bright and clean. The extra expense for lettering one of the glasses to a honey-case is 25 cents.

If you you can not make a folder as per description on page 613 we will furnish you one for 50c. If wanted by mail, 5 c extra. These folders will without trouble fold rabbets for Simplicity hives, or anything else, not over 14½ inches. "John" wishes us also to say, that if any of you need any help in making tin cups or honey-pails, he will be glad to explain, if you will address him in our care.

The new Waterbury watch has created quite a sensation wherever it has gone, and I tell you we have sent out a "heap" of them since our last. The expression "My neighbor wants one just like it," has got to be a pretty common phrase. Well, we have a good supply still on hand, and, what is more, we can now send them free of postage for the $3.50. If by express or freight, with other goods, 15 cents may be deducted from each watch.

We are just about adding children's sleds to our counter goods. The 5-cent sled is rather to be used indoors. The 10-cent one will do very well for small children to ride on. The 15-cent one is the same tastily painted. Any of these can be sent by mail in the flat, and the postage will be equal to the value of the sled. For 25 cents we can furnish a sled that will hold any reasonable (in pounds) boy; is pretty fairly ironed, and tastily painted. As it is put together with screws, it can be sent in the flat without much extra expense, when ordering goods. We will try to give you engravings of them next month.

BUSINESS FOR THE WINTER.

Isn't the following suggestive?

> Will you please send me 300 one-pint honey-pails by R. R. freight, via Cincinnati, unless you know of a shorter route. If you can not ship without delay, please advise me. I sent —— —— an order nearly eight weeks ago, and have not the pails yet.
>
> E. M. Hayhurst.
>
> Kansas City, Mo., Nov. 23, 1881.

As we had the pails ahead, they went by first train; but, my friends, it does not pay to send long distances for such goods. The 300 cost only $12 75, and they ought to be obtainable near every bee-keeper's home. Boys, are you going to let Mr. Merrybanks' neighbor "John," have all the fun making tin pails?

In selling the counter goods so closely as we do, many of them, we have found it necessary to add one cent each, besides the postage, for packing; so if you find the stamps are not equal in value to the amount charged in the list, do not think we have overcharged. The strong paper and twine we have found it necessary to use to stand mailing are more expensive than you may perhaps be aware of.

Postage.] [Pr. of 10, of 100

THREE-CENT COUNTER.

	Bowls, yellow ware, 1 pt.; useful......	25	2 25
2	Handkerchiefs, for children, pictured,	28	2 50
2	Key Rings, superior quality, with balls	28	2 50
	Mugs, for children, glass..............	28	2 75
4	Mugs, for children, china	28	2 75
4	Pans, Corn cake, circular, 3x2 in......	25	2 00

FIVE-CENT COUNTER.

2	Albums, Autograph..................	38	3 50
	Paper covers, illuminated, nice for school children.		
7	Dish Pans, toy, 2½x6 in................	43	4 00
	Cute for children and "handy to have in the house."		
6	Flour Dredges, japanned, very nice..	43	4 00
5	Kaleidoscope, a pretty optical toy....	43	4 00
4	Papeteries. 12 white envelopes and 12 sheets of paper in a pretty box	48	4 75
2	Pen and pencil, Combination	40	3 75
7	Pans, patty, per ½ doz	45	4 00
	Over 20 different sizes and patterns. Splendid for Maple sugar cakes, etc.		
2	Spoons, table, tinned iron............	38	3 50
10	Stove Cover Lifter, "always cool" ...	42	3 90
5	Stove Cover Lifter, wood handle......	33	3 00
6	Wash boards, toy	43	4 00
	A fair match for the dish pans, and useful — to delight some child's heart.		

TEN-CENT COUNTER.

2	Compasses, magnetic..................	95	9 00
	With ring to hang on watch chain.		
2	Handerchiefs, linen, ladies size	90	8 50
	Nice, with plain and "mourning" borders.		
3	Lamp Burners, Venus	85	8 00
	Two sizes, for straight chimney, No 0, or 1. I have decided these to be the best burner made. No. 2 burners one-half more.		
2	Match Boxes, rubber...................	85	8 00
	Opening at either end, very handy.		
3	Our Homes, Part II....................	80	7 00
12	Pans, patty, per doz	85	8 00
	Six different patterns. Nice for maple sugar cakes, etc.		
10	Pans, bread, oval, 8x10x2½............	84	7 80
	Sad Irons, toy..........................	85	8 00
2	Slates, book.......................... .	80	7 50
	Nice to carry in your pocket for memoranda.		
2	Sun glass or burning glass............	75	6 00
3	Twine, pink, cotton, jewelers.........	75	7 00
	Put up in 2 oz. balls, just the thing for nice packages.		
	Whips, riding..........................	80	7 50

FIFTEEN-CENT COUNTER.

2	Hdkfs, ladies, linen, hem stitched..	1 40	13 00
20	Pans, Dripping, tin	1 25	11 00
	With wired edge, 2x11x16½.		
15	Pans, patty, per doz..................	1 25	11 00
	Twelve different sizes, for sugar cakes, etc.		

Twenty-Five Cent Counter.

5	Carpenter's Dividers, with wing....	2 25	20 00
	Pans, Patty, per doz, large size, 3 patterns, 4, 4½, and 5 inches.....	2 00	18 00
	Tongs, Coal..........................	2 00	18 00
	Plates, Bread, especially for bee-keepers..........................	2 00	18 00
	A beautiful plate, with bee-hive and bees, done in frosted work on the bottom. Heavy flint glass.		
6	Shawls. Plaid, merino (?), but warm and handy, any way...............	2 00	18 00

Thirty-Five Cent Counter.

4	Spy glass or toy telescope, one draw	3 00	25 00

FIFTY-CENT COUNTER.

	Lamp, large size, complete with burner and chimney; beautiful..	4 00	35 00
5	Spy Glass or toy telescope, 2 draw.	4 00	35 00
	Washboards, stone, very nice.......	4 50	42 50

Seventy-Five Cent Counter.

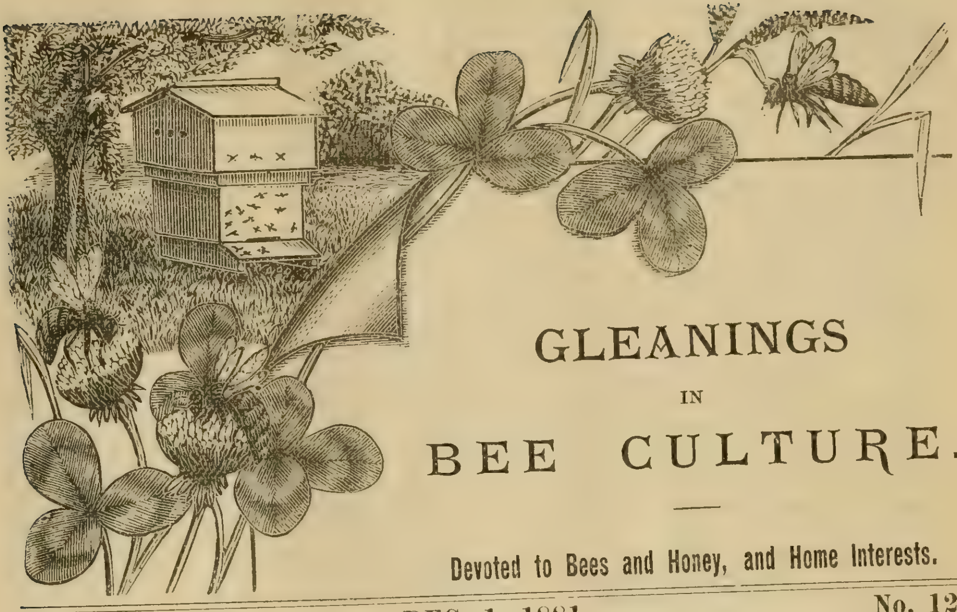
16	Telephones, Bliss, 200 ft. of wire....	7 25	70 00
	Especially to tell when bees are swarming, see Nov. Gleanings, 1881.		

FOR $1.50.

Bell Jack Screw for raising buildings. Size 8x1¼; will lift 10 tons. A most handy tool on the farm.

A full list of counter goods mailed on application, and we can send goods for the holidays to any friend you may have anywhere, promptly on receipt of order.

A. I. ROOT, Medina, Ohio.



GLEANINGS
IN
BEE CULTURE.

Devoted to Bees and Honey, and Home Interests.

Vol. IX. DEC. 1, 1881. No. 12.

A. I. ROOT,
Publisher and Proprietor,
Medina, O.

Published Monthly.

Established in 1873.

TERMS: $1.00 PER ANNUM, IN ADVANCE
2 Copies for $1.90; 3 for $2.75; 5 for $4.00; 1
or more, 75 cts. each. Single Number, 10 cts
Additions to clubs may be made at clu
rates. Above are all to be sent to ONE POST-
OFFICE. Clubs to different postoffices, NO
LESS than 90 cts. each.

NOTES FROM THE BANNER APIARY.

NO. 25.

HOW OFTEN I GET LAYING QUEENS FROM MY NUCLEI.

NO, friend Hayhurst, I don't get a laying queen from each nucleus once in ten days. Several times I have taken laying queens from nuclei from which laying queens had been taken only *eight* days previous; but even in the height of the honey season I do not get, upon an average, more than one queen from each nucleus once in two weeks, while early in the spring, or late in the fall, I do not do as well as that. Yes, some of my queens go off upon their wedding trips, and never return.

INTRODUCING VIRGIN QUEENS.

Friend Doolittle has not had very good success introducing virgin queens, while the editor of one of our bee papers seems to almost doubt that it can be accomplished. Now, *when honey is coming in plentifully*, I *prefer* to give a nucleus a young queen at the same time that the old queen is removed, rather than wait a day or two and then give it a young queen, or even a queen-cell. At such times the bees seem to pay no more attention to a young queen than they do to a newly hatched worker, and I have no trouble in introducing virgin queens, even when they are two or three days old. When honey is plenty, the bees seem to be fairly "crazy" to gather it; they have no time to spend quarreling with virgin queens. But when there is a dearth of honey they have more time to brood over their troubles, and then, as friend Hayhurst says, I am more successful by leaving the bees queenless a day or two before offering them a stranger.

QUEENS WHOSE DAUGHTERS ALL PRODUCE THREE-BANDED BEES.

Now, friend Doolittle, about those extra-pure queens. I have read the references that you gave in regard to the matter, but not one of them mentions a queen whose daughters did not produce one or two banded bees, or hybrids. The daughter of each wonderful queen *produced* no *black bees*, but nothing is said as to whether they produced hybrids. Like friend Root, I have seen queens whose daughters produced no black bees, but I have yet to see the queen whose daughters produced no one or two banded bees, if they had mated with a black drone. Now come right out fair and square, friend D., and tell us if you have a queen whose daughters produce no one or two banded bees, even if they have mated with black drones; and, also, how you can tell which kind of drones they have mated with. When you rear queens from this extraordinary queen, do you send them out as tested queens, without first testing them? And if you do not, it would look as though you did not have perfect faith in the capabilities of your queen. If you really have such a wonderful queen, and are willing to sell her, I think I can find a man who will pay $100.00 for her; because he could send out her daughters as tested queens, just as soon as they commenced laying.

I don't know, friend D., but you will think me very inquisitive; but in your report for the present year you say that you commenced the season with 30 colonies; increased them to 80, and reared and sent out 83 tested queens; while in the Aug. GLEAN-

INGS you say that you reared over 200 queens; now, what did you do with the 67 extra queens? were they culls, and had their heads pinched off, or —— no, it can't be possible that Doolittle has been guilty of selling *dollar* queens! How is it, friend D.?

EDUCATION AND ABILITY.

Now see here, friend York;* what business had you to go and guess that I meant *you*, and then go on and talk like that about my education and ability? I think that if you were a little mouse, and lived in my shop, and neighbor W.'s big cat didn't catch you, and you could peep out of some hole and watch me when I am preparing these "notes," and see how many times the dictionary, grammar, and rhetoric, are pulled down from the shelf, and how much hard thinking I have to do, you —— well, I presume that you would wonder why my articles are not better than they are.

READY FOR WINTER.

I have just finished putting ten colonies into clamps; eleven more were prepared, more than a month ago, for wintering out of doors, and seven more are ready for the cellar, whenever the cold weather comes. This is the first time that I have commenced the winter with more than twelve colonies. W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

A BOOM IN ENGLAND.

EIGHT COLONIES FROM ONE IN ONE SEASON, AND EVER SO MUCH HONEY.

FRIEND ABBOT in his happy way tells of the following "streak of luck" in the November number of the *British Bee-Journal*:—

English bee-keepers, as a rule, have great cause for rejoicing; but in Scotland and Ireland the results have not been cheering, though here and there some good takes have been recorded; notably, one in Ireland of 180 lbs. from a single stock, and a query will doubtless be freely echoed, If one, why not many? And although we are not able to say what other stocks in the same apiary have done — though we shall probably have a report — we would remind our readers that there is generally a best stock in every apiary, and in a large apiary the best is usually "a wonder." We have had such an experience with our own bees this year; and if every stock had served us similarly, we should declare bee-keeping to be not *one* of, but *the* most profitable business extant. Toward the end of April, a stock of half Syrians was so strong that a second hive of combs was put under it, and this was rapidly filled, and the population so immense that on May 14 it was divided into three, foundation being given to the swarms, and thus there were, in a fortnight, three splendid stocks, A, B, C. From A we took, during June, two full swarms, and during July, extracted 27 lbs. of honey; that stock is now strong and well found for winter. From B, the swarm, we have also had two swarms (one a cast, which we have kept, and which is also safe for winter), 6 lbs. super, and 21 lbs. of extracted honey; and B is now in good winter order. From C we had one swarm, and 38 lbs. of super honey; 12 2-lb. sections, for which we were awarded a prize at South Kensington, but the stock which is very strong in bees needed 10 lbs. of syrup to fit it for wintering; it is choke full of bees, and has a large quantity of brood, and, all being well, will be fit for repeating the career of its parent stock in the spring. Here, then, has one stock multiplied into eight, and those we have retained have yielded 44 lbs. of comb honey in sections, and 46 lbs. extracted. What the four swarms that were sold have done, we can not report; but as they all went out early they must have done well. The profit on that one stock has been simply enormous — say it was worth three guineas in April, there are now four stocks of equal value; four swarms have been sold for 6*l*., and the honey for 5*l*. 6*s*., making a nice little sum altogether, and we have four stocks left. Many other stocks did exceedingly well, but this, the only lot we worked for comb honey, made us wish there had not been such a demand for swarms, as evidently, this year, honey-getting would have been the more profitable game.

Did I not tell you a great honey yield was liable to "happen" to almost any of you? Here follows some advice for the fall months. See if it fits you:—

Apropos to this, we may mention that a noted bee-keeper and caterer, formerly of Crawley, in Sussex, has discontinued hive-making for sale, and has gone in for honey only, at Rottingdean, in the same county, whence he has kindly forwarded a description of his draught-preventer, mentioned on another page. We owe an apology for wandering into our own apiary, and penitently return to "our muttons," to advise that as bees are now quiet, every thing possible should be done to prevent future disagreeables. Hive-roofs should be thoroughly investigated and made rain-proof, and vermin carefully exterminated (it is astonishing how many thousands of insects may be prevented by destroying their nests now), a routing-out of crevices with a small bunch of birch-broom will be of great service. Old combs should be boiled up (or melted down) to prevent harbor for wax-moth, and the possible spread of disease; old skeps should be burned for the same reason; old frame-hives that are too good to burn should be thoroughly cleansed; old ideas should be sifted, and old debts paid, particularly those outstanding for the *Bee Journal;* and then to a goodly number we can say there will be something off your minds as well as off ours.

LECHLER'S 600 LBS. TO THE HIVE.

ALSO SOME KIND WORDS FROM FRIEND WILKIN IN REGARD TO EXTRAVAGANT REPORTS.

EDITOR OF GLEANINGS:—In yours of Oct. 20, you ask me to answer to the particulars of the inclosed card which you sent me, which reads as follows:—

> G. W. Lechler, of California, says on page 499 of GLEANINGS, that he got 9 tons of honey, and an increase to 80 from a start of 30 colonies in the spring. I should like to see that statement sworn to before a justice of the peace. Six hundred lbs to each colony! I wonder how many thousand pounds his best colony gave! * * * I have taken 6200 lbs. from 35 colonies in the spring, and one-half their increase; the rest of the increase I worked for queens, etc. More honey yet to come. I did think I had done pretty well. W. S. HART.
>
> New Smyrna, Fla., Oct. 9, 1881.

My neighbor Sobey said to me, in reference to Lechler's report, "Ah! Root ought not to publish such stuff as that until he investigates it." That is what I thought of the big Texas story of the bee-cave you published lately; how the waters of the stream passing by were sweetened so far below from the drippings of the cave, and also the meat of the bears killed in that region tasted sweet from the same cause, except you had published it in a way *only* to bring out the question whether there was any extraordinary yield of honey in those parts to give rise to such monstrous tales.

About ten years ago, at the National Bee-Keepers' Convention at Cleveland, O., at which friend Root and myself were present, Hosmer, of Minnesota, made this proposition to the members of the convention: "If any one of you will buy one hundred of my 110 hives of bees at $10. each, you can have them, to be paid for only on the condition that, from my remaining 10 colonies, reduced to only nuclei in the spring, I do, the coming season, take 10,000 lbs. of honey." The members half believed he would do it, so plausible was his story; yet none of us took his offer. Gravenhorst, a noted bee-keeper in Germany, seeing the report of Hosmer, wrote me, "How is it in America? does it *rain* down honey? if

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*See page 499, October number.

Hosmer do all he say, then I sell all I got and come to America."

If a stranger makes a statement that the general experience of others would pronounce incredible, with nothing to back his statement except his own say-so, he is very unfair if he do not allow the public to question the truth of his statement.

Lechler lives 20 miles from me. I have no means of knowing how much honey he did get; some one says his apiary is for sale, and accounts for the big report in that way; I do not know about this; he certainly has a choice location, with a few bees, not crowded by neighboring bee-keepers, some of whom have had very large yields.

California has more diversity of soil, climate, and products, than most States; a combination of favorable circumstances makes it yield in places, at times, the largest trees, the largest gravevines, pumpkins, and mustard, that the world knows of; also the largest yields of honey and increase of bees. It also does the most *unaccountably* mean things; defeats you where you were positive of success. I have kept bees here in California for six years. My best yield was an average of about 300 lbs. to the hive, and a little more than doubling my stock (I always credit the old stock with the surplus from their swarms). Two other seasons I did nearly as well. The past season yielded nearly nothing; two other years I got nothing; lost half my bees, and had plenty of bother. I think but very few in Southern California, with the same number of bees, have done better than this. Previous to 1877 I think there had not been so many failures, and we hope there will not be so many in the future; yet I do not know but we must have, to prevent being overrun with bees. With a few bees in a good spot, plenty of empty combs, the owner hitting on the best management for *that* year, extraordinary things have been done. I can not say Lechler's statement is impossible. Quite a number have increased from 1 to 10 in a season. Our deputy-sheriff, on whose word I can entirely rely, told me he had increased from 1 to (I am almost *sure* it was) 30 in a season, nearly all good for winter. You see, if he had 15 he would only have to double to get 30.

R. WILKIN.

San Buenaventura, Cal., Nov. 8, 1881.

Why, friend W., did I not publish the bee-cave story just as you say? The very fact of its having come from the *Youth's Companion*, a paper largely fiction, was, I thought, sufficient to caution our readers, especially with my closing comments. I have many times published statements like these, thinking the truth might be brought out by so doing, and I think it has been. The present case seems to illustrate it. Another point: After such reports as these, we watch the man afterward, and look for the outcome. Doolittle gave us astonishing reports, but he has since backed them up, year by year, which would have been much more convincing from friend Hosmer than the foolish wager you allude to. Those who send in such reports must expect to be looked after. I do not feel like refusing to publish these statements, because I myself was once looked upon with great suspicion, even by some near friends, because I reported over 300 lbs. from one colony, and 43 lbs. of honey in three days. If it is really true, that friend Leckler's apiary is for sale, it looks a little bad; but we trust he will come forward and vindicate his truthfulness. It don't hurt an honest man a bit to have his statements questioned, friend L., and we hope you will hold no hard feelings toward friend Hart, who has only expressed what a great many of us could hardly help feeling.

Later.—Here is a letter from friend Lechler himself, which many will probably read with interest, as it is mainly in regard to his locality, etc.

BEE-FARMS IN FRIEND LECHLER'S LOCALITY, ETC.

MR. ROOT:—Several parties have written to me for information in regard to this country, and the chances for obtaining bee-farms, etc.; and as postage stamps cost money, I thought I would reply to them through GLEANINGS, if you see fit to publish the reply, as all the inquirers say they obtained my address through that source; so I came to the conclusion they all take it or borrow it.

I will state that there is plenty of fine locations for sale or rent, both in Los Angeles and Ventura counties. There are a few stands of bees for sale in both counties; the price ranges from $3. to $5. per stand. The Langstroth hive is used by most bee-men. Very few take the supers off in winter; as for foul brood, I hear but little about it now. A few years back there were some apiaries that were bothered with it, and claimed they caught the disease from feeding diseased honey; but on investigation I find about the only apiaries affected were those where the owners practiced artificial swarming, and allowed the brood to get chilled; and of course dead brood does not hatch worth a cent. That is my idea about foul brood. What say you? We have over 400 stands in this locality, and allow them to swarm naturally, and have never found any foul brood.

The price of honey varies with the seasons. Last year, extracted honey sold in San Francisco from 4 to 8 cts. per lb. This fall it is worth from 8 to 12 cts. I think there would be no trouble in contracting honey at 5 cts., no matter how good the season is, as every year honey is taking the place of sugar more and more. We have had one fine rain this fall, and every thing indicates a wet winter. If so, we shall have a good honey season next spring and summer. My bees are all out to-day, and are still getting some honey from flowers that are in bloom. The rain has started vegetation, and one more shower and the earth will be covered with a coat of green in this part of the country. I was out hunting a few days last month; killed 6 deer; met 2 parties of hunters; one had killed 23 deer and one bear, and the other party 12 deer; so you may think this is a land of venison and honey, as well as milk and honey. I wish I could send you a nice saddle of venison for Christmas; but you are too far off; but I will think of you all the same when I have a big roast.

G. W. LECHLER.

Oak Park, Newhall, Los A. Co., Cal., Nov. 4, 1861.

HOW TO TURN LANGSTROTH OR SIMPLICITY HIVES INTO CHAFF HIVES FOR WINTERING.

AND THAT, TOO, ALMOST WITHOUT EXPENSE.

THE way to do this occurred to me a few mornings ago, and I proceeded at once to do up one dozen of colonies as an experiment. As I looked on them after I had the bees snugly ensconced in their new quarters, I felt better satisfied with it than with any thing I had seen or heard of as an out-door-wintering hive. I give the plan, that others may try it.

Take ½-inch boards, 10 inches broad. Cut three pieces just the length of the top of the comb-frames, and a fourth piece ⅜ inch shorter. Nail them together, the short piece *on* and not between the sides, and even with them at one end. Thus you have a box 9x10x19¼ inches in the inside, just right for six frames. This box is to stand on end, the short side to the front, and the short end of this side down, for an entrance. A strip ⅜ of an inch square should be nailed to each outside at the bottom, and project 3½ inches in front, and a board 3½ inches broad nailed on this to cover the entrance-way. To hold the frames together and in place, and away from the front and back of the box, strips should be nailed, two on the front, one near the bottom; and one on the back near the bottom. A strip ½ inch square should extend from side to side, ¾ inch from the bottom, and two inches from the front for the end of the frames to rest on to keep them from dropping out when you lift the box. A notched strip should be made to slip over the upper end and back of the frames after they are in, to hold them in place and away from the back. To put the bees in, set the box on a board or the cover of the hive; lift the frames one by one, commencing at the side, and slip each frame down in the notches prepared for it, putting the bottom of the frame toward the front of the box, and the front end of the frame down. This can be done easily without hurting the bees. The only difficulty will be with the last comb. If the comb has projecting points, these should be cut off with the honey-knife, and it will go in readily. After the frames are all in, slip over the tops of their upper end, the notched strips to steady them. Then brush the bees out of the hive and set this box in the center of the 10-frame hive, with the cover of the entrance-way tight against the front end of the hive. Put a cloth over the tops of the box, fill in around it with chaff; put on a second story, and fill as before with chaff, piling it up over the cloth cover; or better, put on a third story and fill it with a chaff cushion so that you can open the hive at pleasure. This gives a tall narrow hive, well protected, with the honey at one side, and above the bees. It gives them ample room to cluster away up out of the cold from the entrance. It overcomes the objection to the Langstroth hive, that it is too shallow for wintering; it does away with the objection to the chaff hive, that in the summer you have to lift the combs one by one out of the upper to get at the under story. This hive can be taken down, and the bees and combs returned to their old place in a few minutes. The boxes can be put away in the shed, and every thing made ready for summer work in a few hours. Give it a trial.

Milroy, Pa. REV. J. W. WHITE.

Many thanks, friend W.; but your idea is substantially the same as that given in some of the earlier volumes of GLEANINGS. If I am correct, quite a number tried it, but for some reason it has been abandoned. I made a test of it on one weak colony that was dwindling; but as it didn't seem to save them, I let it drop. I used no box, but stood the frames on end, put blocks between them, and after the bees had waxed all together, covered the whole with a sack of bagging. Since you revive the matter, I feel it would give about as good protection from the weather as a chaff hive, only that I should be a little afraid the bees might get above some of the honey, and starve on empty combs in the very top of the hive. I wish the matter might have a more thorough test, for it would be a very great saving of expense to those who have only Simplicity hives to winter in. We could make these boxes quite cheaply. On the other hand, however, it would be quite a task to prepare a hundred hives thus, and then have the whole to put back in the spring, and put the boxes away, while the chaff hives are always all right, both winter and summer.

The "Growlery."

This department is to be kept for the benefit of those who are dissatisfied; and when anything is amiss, I hope you will "talk right out." As a rule, we will omit names and addresses, to avoid being too personal.

I WROTE Mr. Burch, telling him to send me on my bees, if he thought it would not make any difference in their wintering (I had before told him I did not want them, but wanted my money back). To-day I received a card, saying if I wanted them he would ship at once, but advised me to wait till spring. This is perfectly satisfactory to me.

You ask me if I think you should be responsible for money sent by those who are not your subscribers. As I presume this is meant to include myself, I will tell you what I do think, and first will quote you one of your own texts. "He that doeth righteousness, is righteous." Ordinarily speaking, I would not hold the publisher responsible for his advertisers' wrong-doing; but in the case of one like yourself, who pretends to such a very superior degree of holiness (?), and also of his great influence with the Lord, I would most assuredly hold you responsible for every cent sent by one who had been a subscriber, and who had sent money before you published the articles reflecting on the intention or ability of any of your advertisers to fulfill their promises. But you know very well that your whole object in offering to pay Mr. B.'s debts, or those of any one else, was simply that you might make your readers exclaim, "What a very good man Mr. Root must be! for he will not see any of his subscribers suffer so long as he can kelp it." And this, too, when I do not think you had the most remote intention of paying a single dollar. But then, this is just of a piece with every thing I have ever seen from you in the two years I have watched your course in GLEANINGS. There is not a single line written by you, whether in Our Homes (which, by the way, should properly be included under the heading of Humbugs and Swindles, for if it is not a swindle it is from first to last a grand humbug) or in any of the other departments, but, if rightly understood, is intended solely for the praise of A. I. Root and his wares. If I could afford to do so, I would like to continue my subscription, for the sole purpose of watching the development of what I am very much inclined to think will one day prove to be a much greater failure than that made by Mr. Burch; and when it does come, if ever, I do not believe that your creditors will fare as well as those of Mr B. I would like to write a great deal more, but as my time is worth something to me, and I doubt whether you will read even this much, I will now bid you adieu.

J. P. BYRNE.

Foster's Crossing, Warren Co., O., Nov. 17, 1881.

In our young people's prayer-meeting last Sunday evening, a lady said that we should thank God for our enemies, because they tell us of our faults, which friends never do. If that is so, it seems to me I should be very thankful indeed for the above letter. Let us see if we can not find something good in it. One strong point is, that we should be very careful indeed about doing or saying any thing that might induce anybody to think we are claiming to be holier than other folks. Besides this, friend B., you have given me about the biggest stirring-up I ever had in my life, in the way of a resolve that I would get out of debt. Perhaps it has given friend Burch a similar determination. I am going to commence to-day to cut down outgoes and expenses, and save the coppers; and *you just see* if I break down. As a general thing, I think it well to keep cool and not get stirred up; but I do not know that it would hurt us a bit, a great many of us, if we got considerably "riled" when twitted about our finances, if we only *kept* riled long enough to have every thing fixed up snug and trim. Now, boys, who of us will present the best record for being straight, careful, and prompt? Friend B., if you ever come our way, please give us a call; it may be that your letter has been the means of doing me more real good than any one I ever received in my life, even if I was "boiling for a *fight*" when I first read it. Do you remember, friends, "Count—it—all—joy," etc.?

A BOOMING REPORT FROM TEXAS.

216 LBS. COMB HONEY, AND 304 EXTRACTED, IN ONE SEASON, FROM THE DAUGHTER OF A DOLLAR QUEEN.

AS the honey season is just now over with us, I will send in my report below. I will give what our best hive did, and also the average. At 12 o'clock, May 30, we placed our best hive on the scales; they gathered,—

That Eve..... 7 lbs.	June 7.......23 lbs.	June 15 ......18 lbs.
31......15 "	" 8.......22 "	" 16 rain 10 "
June 1......24 "	" 9.......19 "	" 17.......50 "
" 2......21 "	" 10.......18 "	" 18.......41 "
" 3......22 "	" 11.......33 "	" 19.......27 "
" 4......26 "	" 12.......35 "	" 20.......18 "
" 5......25 "	" 13.......30 "	" 21....... 4 "
" 6......16 "	" 14.......37 "	" 22....... 5 "
Total.... 156 lbs.	Total.... 217 lbs.	Total.... 173 lbs.

Grand total..546 lbs.
Lost..144 "

Net..402 lbs.

You see, in 24 days they made 546 lbs., and every night they lost 6 lbs.; and how it was we could not imagine. They were always weighed before any bees got out in the morning, and after they all came home at night; so you see, at the time the drought set in, June 23d, we had taken them off the scales, and they made more honey in the fall; so now I will just give the exact amount of honey we have taken from them. We have just the number of times we took honey, and how much each time, without any date. The 1st time, 5 lbs.; 2d, 14; 3d, 4; 4th, 30; 5th, 111; 6th, 140; 7th, comb honey, 107; 8th, comb, 70; 9th, comb, 39. Total, 520 lbs. You see, we took 304 lbs. extracted honey and 216 lbs. of comb. This statement is badly made out, but correct. If anybody doubts it, we can bring forth four witnesses who will testify to the above. This colony wanted to swarm the latter part of March. As we didn't want any more bees at that time, we ran them for honey. All through the months of May and June, the above hive was a 4-story Simplicity, holding 40 L. frames and a good circle of brood in every frame. The queen is a full-blooded Italian that I raised myself from a dollar queen bought of Mr. Root two years ago, and I now have nearly all my hives stocked with her daughters. In conclusion, my 44 colonies averaged me 196 lbs. of honey each, amounting to $624 lbs.; about one-third comb honey, and I sold at an average price of 14¼c per lb. This brought me 1228.92. This is the season's work for myself, wife, and two brothers. I fear from some cause my bees have foul brood. I hope not, but they look suspicious.

E. J. ATCHLEY.

Dallas, Tex., Nov. 7, 1881.

Friends, there is something more in the above startling report, than the simple fact that friend A. had a great flow of honey, and wisely made the best of it. If you will look through our back numbers, you will see that booming reports have unexpectedly turned up first in one State and then another, until the beginner who is looking for the best locality in which to make a start is sorely puzzled, and perhaps somewhat perplexed, to account for these statements that startle us almost, as they shoot up into view almost with the suddenness of a rocket. Is it not true, that none of us half understand or comprehend what is in store for us, when we once understand our business intelligently? — Friend A., the loss every night is caused by the evaporation of the water contained in the thin new honey. I believe it is always the case, but it may not be to so great an extent as you mention. In looking the report over, I have been inclined to think the 50 lbs. reported on one day might be a mistake. Did you not skip one day, or does it not include at least a part of two days? The whole secret of the great yield is in the queen of such astonishing fertility as to keep brood in 40 combs, all at one time. Those who have been so thoughtless, not to say unkind, as to condemn the dollar queens as a class, would do well to consider this and other reports of a similar character. I would say to the friends who read this, that I have known friend A., and have dealt with him for many years, and I am sure he has made his statement honestly.—I trust you are mistaken about the foul brood, friend A. There has been quite a little of borrowing trouble where parties imagined they had it, where it was only dead brood from some ordinary cause, such as leaving it exposed, etc.

CELLAR VS. OUTDOOR WINTERING — AND VENTILATION.

I WANT to put in my plea in favor of cellar wintering. I have now for eight years wintered my bees successfully in the cellar. My cellar is only 12 feet square, directly under our living-room, which contains a stove, of course. The cellar is not frost-proof, as our potatoes frequently freeze. This 12-foot cellar frequently contains 30 to 40 colonies of bees, besides potatoes, apples, lard, meat, and several dozens of cans of fruit, and still leaves room for entrance and exit. Last winter I placed bees in cellar about the middle of November, where they were left undisturbed until February 22d, when I set all out for a fly. A few I found uneasy with symptoms of dysentery, and combs somewhat moldy. The cause was plainly to be seen: the entrance was not large enough for proper ventilation. I use Simplicity hives, with loose bottom-board; a slot cut in bottom-board, triangular, ⅜ of an inch deep. I then placed a block ⅜ of an inch thick under each corner, slightly raised each cover, and loosened the enamel coth. A few days after, all were dry and in good condition. Hereafter I shall thoroughly ventilate each hive. I had a neighbor a few miles from me that kept from 20 to 30 colonies of bees in box hives, and always wintered them on their summer stands; he always kept an inch block under each corner, and left the cap (a box 12 inches square by 6 inches deep) on, with the entrance of an inch auger-hole in the cap open; and he generally wintered successfully. I have, at times, put bees in the cellar that were very weak, but would come out strong in the spring. Have never had any trouble from spring dwindling. While I know that we can winter our bees at times out of doors, I think the bees, as well as ourselves, would be more comfortable if warmly housed. It has been frequently demonstrated that cattle, horses, sheep, and other stock, can be wintered in a wooded lot, or around a straw stack; still, I can sleep much better when I know my stock is in a good warm barn; and I imagine the stock appreciates the accommodations also. In cellar wintering, I never remove any frames, or contract the brood-nest. Mr. George

Grimm's method is mine exactly, and I thoroughly agree with Mr. Jerome Wiltse on ventilation. I simply write to corroborate them.

Elmwood, Ill., Nov., 1881. **M. H. SNYDER**

Have you not simply compared cellar wintering with outdoor wintering without protection, friend S.? I too sleep better when I know my bees are comfortable; but with our varying climate, it seems to me they are most so in well-fixed chaff hives, in their summer houses, undisturbed.

A CHEERING REPORT FROM OUR OLD FRIEND J. S. WOODBURN.

ALSO SOMETHING ABOUT LATE-REARED QUEENS.

BY the middle of April last I had in my yard here 12 colonies of Italian bees, only 5 of which were entitled to the claim of being fair, average colonies. The remaining 7 would not, I believe, have been purchased by any of your readers as third-rate nuclei. All of the number, moreover, were nearly through with their winter stores. Feeding, nursing, and a building-up of the weaker from the stronger, was the only programme of management that seemed to promise any thing short of the practical extinguishment of my "Home" apiary (these 12 were the sole survivors of the 30 fine stocks which this apiary counted in the fall of 1880), and upon this programme I entered with but slight expectation of the bountiful return which a kind Providence had in store for me. Thirty lbs. of sugar were made into a thin syrup, and fed to the 12 colonies, principally to the stronger ones, and as their brood began to hatch, assistance was brought from the stronger to the weaker, and this was kept up till I had in each of my hives a state of things that enabled its bees to conserve to the full the laying capacity of their queen. About the first of June, 10 colonies were selected and arranged for the extractor; the other two were divided and devoted to the raising of queens. And now here is my report for the season:—

From the 10 run on the extractor I received 1119 lbs. of the finest honey I ever handled, and 22 swarms. From the two consigned to the rearing of queens, I sold $34.00 worth of queens; took 46 sections of comb honey, and now have from them 8 good stands of bees. To put these and a few of the others in approved condition for winter, I have fed this fall just 200 lbs. of sugar; but as the cost of this, as also of the 30 lbs. fed in the spring, and 2 Cyprian queens purchased during the summer, is more than "offseted" by the proceeds of queens sold, I have still the happiness to report my yield for the season as fully up to the amount of honey taken, and increase of stocks secured; that is, 1165 lbs. honey, and 28 swarms, or 96¼ lbs. honey, and 233⅓ per cent increase per colony, spring count.

My honey was all sold at an average of about 12½ cents per lb. within 60 days of its being taken from the hive, and without the least conscious effort. I did not even have to hang my sign upon the gate; the honey was so good it just sold itself. My bees are, I think, in exceptionally good condition for winter.

I close with this single statement, together with the moral to which it unmistakably points. My queens in the spring were, with two or three exceptions, reared late in the season of 1880, and were therefore such as Mr. Doolittle and a few others would condemn as comparatively worthless. But the lesson to which this fact points, especially in the light of this season's work, it seems to me, is that it matters not when or how our queens are reared, *provided* they are raised from approved stock, and at a time when the internal economy of the hive is such as to supply the essential requisites of the *swarming* period: namely, flying drones, brood in all stages, and a full proportion of workers of all ages, and under the agreeable stimulus of busy labor. And who, I may add, knows better how to attain and to maintain this indispensable condition of things than the intelligent and wide-awake bee-keeper who is endeavoring to turn an honest penny in connection with the pressing demands of the "dollar queen" trade? Given the pasturage of the Doolittle ranch, and the practical skill and well-timed diligence of the Doolittle brain and hand, and there is not, I firmly believe, an Italian apiary in the broad land that would not compete closely with the Doolittle apiary in its yearly returns. **J. S. WOODBURN.**

Livermore, Pa., Nov. 8, 1881.

APIS AMERICANA.

THE COMING BEE.

MY understanding of *how* to produce a strain of bees, all points considered, superior to any race or strain we now know of, is so simple that I am induced to outline it to your readers, after reading the ideas of friends Hutchinson, Viallon, and others, upon the subject. The above-named gentlemen seem to be somewhat mixed up as regards the best ways and means, and whether any such result can be obtained or not. I may be mistaken in my judgment, and a little more light might rob me of my clearness in the matter, and dazzle to blind; but I feel thus confident, that I will give you my course. I will first make a few statements upon which I feel sure all will agree, and then draw my deductions from the facts I shall state, and leave you to judge of their logic.

1. Markings are no *positive* indication of any special degree of any trait in the character of the bee. We have all seen colonies standing side by side that were equal, in every way discernible, to the master; and yet that result which we so highly prize came from one in a two-fold degree, compared with the other.

2. Traits of character are as hereditary with the races of bees as with other races. The above fact we have demonstrated over and over again, in our manipulations of the two races now common to the apiarists of this country. Italians closely guard the hive; Germans speedily build comb; Cyprians sharply sting.

3. We are now in possession of good qualities enough to meet the demands of the highest aim of our most progressive breeders, and the only work left is to consolidate these qualities into one strain of bees, and, to the exclusion of various other propensities possessed by the various races and strains now ours. Then we can exclaim, "Eureka!" Apis Americana!" How we shall accomplish this object, is what I am going to try to point out. If you have in your yard a queen which is abnormally unprolific, you destroy her, with almost perfect assurance that the one the colony will rear from a cell from

that large prolific queen over in the corner, will be a prolific one. Such is the common understanding and practice, is it not? My experience has taught me that the trait of prolificness is not as surely transmittible as those of good nature and honey-gathering and comb-building propensities. In my judgment the three above-named traits of character are the ones which we should especially seek. In my breeding I never breed from a colony that does not possess them in an eminent degree, nor from one that seriously lacks in the following minor points of excellence: viz., prolificness and watchfulness. I have made these points named above my special objects to breed from, and the reverse of them the propensities to be destroyed throughout my apiary. Friend V. tells friend H., on first page of Nov. No., that he has found the second and third generation from imported bees to lack the energy of their foreign sires. I can account for that only by some peculiarity of his locality. Five to eight years ago I bought daughters of imported queens quite largely of different breeders who reported their apiaries well stocked with imported queens and drones from the same, and of men whom I have no reason to doubt, and I also raised workers, drones, and queens, from imported queens in my own yard, and I will tell you to-day that the best, most profitable, and pleasant bees that I have ever owned are bees that were produced by crossing the best strains of the German bees with the best of the imported dark leather-colored Italians, at the same time picking from stocks that possessed the above-named qualities in the highest degree.

After this time I can plainly see the fruits of my labor. My methods have not been strict, but general and persistent. Both before and since the use of full sheets of comb foundation in the breeding department, I made it a practice to separate my all-worker and drone combs, and keep the drone combs constantly occupied by such stock as I desired to perpetuate in my apiary, and to rear my queens from the pick of the choicest. Don't understand me that I rear all my new queens. I do not. I allow and encourage all my "standard" colonies (as we call them) to go on in the natural way; but for those below the "standard," I do the queening as above.

I never rear queens out of the swarming season. I never have cells built in any but full strong colonies, and many directly under the swarming impulse. I am aware that some few contend that my queens are no better for that; but I am not among them, and I take pleasure in noting that *none* consider them worse. If it is true that some forced queens appear to be No. 1, and really are; that does not prove that the forced from the forced of the forced will not lack the energy of their ancestors. I have but little faith in the improvements to be made by any breeder trying to follow the above rules, and at the same time anxiously watching the developments of stripes. I have almost totally ignored color, and yet, strange to say, I enter few apiaries that are really yellower than my own. "Cross hybrids" are no more a couplet in our apiary. Such things are not necessary. It seems to me that the whole subject is summed up in the word "differentiation." In every species of animal or vegetable life, wherever found, we see that nature is ever "sporting," thus producing great differences, and this is an earnest invitation to the thoughtful and progressive culturist to improve the strains and species that are under his control. If you wish certain qualities of character, breed toward them. If color, in stripes or otherwise, breed for that.

James Heddon.

Dowagiac, Cass Co., Mich., Oct. 7, 1881.

FROM 12 TO 81 IN ONE SEASON, CONSIDERED AGAIN.

ALSO SOMETHING ABOUT HONEY-PLANTS.

NO, you are not correct on p. 535, if I am correct in understanding you. No frame of brood, nor of any thing but empty comb, was used in building up the 12 colonies to 81. The 59 (you probably mean 69) frames of brood that you speak of as taken from the home apiary were part and parcel of the 12 colonies, a full colony being taken from the home apiary, with a queen-cell in each frame of brood, and distributed in the Wilson apiary. The queen-cells were started by other colonies; but as an offset to this, the 12 colonies had only 8 queens among them, so I think it is not far from fair to say that, by the aid of empty combs, 12 colonies were increased to 81. Most of the 12 were of my strongest colonies, but all my stocks were weak, and one of the original 12 had got no further, up to June 14, than to have a patch of brood in two combs. It may be interesting to give you the exact record of one of the earliest-formed colonies, which, of course, will have a more favorable record than those formed later.

May 24, I started it with one frame of brood and the adhering bees, giving it a queen-cell, putting an empty comb on each side of the brood. May 28, I saw the young queen. June 3, gave one frame eggs. June 11, clipped the queen and took away one frame eggs. June 17, took one frame eggs, leaving only one frame brood. June 25 there was brood in three frames. July 1, took one brood, leaving three brood. July 11, had four brood. July 20, brood in 6 combs. Aug. 16, brood in 7; extracted one comb of honey. Aug. 22, extracted one honey. Aug. 31, extracted one honey. Sept. 6, extracted one honey. Oct. 21, the stock weighed 75 lbs., without cap or cover, in L. hive, with fixed bottom-board, 9 combs, and ⅜-inch division-board. So I suppose it has at least 35 lbs. of honey.

I gave to the work the closest and best care I was capable of, and they had no combs to build; but above all, the season was such as I never knew before, giving an uninterrupted flow of honey from spring till some time in September. And this leads me to think that those of us who wish to make a business of raising honey will, sooner or later, be driven to give some attention to the matter of

ARTIFICIAL PASTURAGE.

If an occasional season gives unusual results, can we not to some extent control the seasons by judicious planting? Now, I don't mean to go crazy on this subject, but I am not keeping bees for fun, but for the money there is in it; and believing that I could get good returns from the outlay, I am willing to invest some dollars in planting figwort, Spider plant, melilot, etc., if I can know just how to go about it. From all accounts, I think I should rather have an acre of figwort than of any other one plant. I have just set out a dozen plants of it that I found growing wild, an old friend first calling my attention to it as a weed on which the bees were constantly at work. I planted a package of seed in the spring of 1880, and not a seed grew; but this year one plant came from the same seed that had lain in the ground a year. This year I planted a larger quantity of seed, but not a plant has come. I think next spring I shall try setting the plants. Now, Novice, you have had perhaps more experience than any one in trying to raise this plant, and have told us a good deal about it from time to time; I believe you would hardly do a better service to the fraternity than to tell us just how you would now go about getting an acre of figwort to growing. At what price will you furnish us plants next spring? how far shall they be set apart? what soil is best? how prepared? how cultivated? You say the self-sown seeds have come up by the million on your plantation. If I should sow the seeds this fall, would they not come up next spring the same as your self-sown seed? What is the seed worth per pound?

I got a peck of melilot, and am sowing it along the road-sides, and I wonder if it would not pay me to sow some in drills to be cultivated.

I notice that catnip grows spontaneously along fence and hedge-rows, and in partially shaded places; and I have been pulling off the seed-heads and scattering them where none were already growing, in shady places.

I planted Spider-plant seed in open ground in the spring of 1880. It came up well, and self-sown seeds from those plants came up this year; but some seed that I saved from the same plants, and sowed this spring, did not come up. What shall I do to get an acre of Spider plants growing? and what will the seed cost per pound? Can any one tell us whether the golden-honey plant spoken of so highly by Dr. Tinker is as valuable in other localities?

Were the figwort seeds that came up in the potato patch (p. 567), this year's or last year's seed?

Marengo, Ill., Nov. 8, 1881. C. C. MILLER.

I agree with you, friend M., that I would rather have an acre of figwort than of any other plant yet brought forward. Although we have had perhaps two acres in bloom this season, it is pretty hard to tell the quantity of honey it produced, where between three and four hundred colonies were at work on it; but the fact that it was, during about three months, such a perfect roar of bees as to astonish everybody, bee-men or not, tells pretty strongly in its favor. If I could have a single acre, say on some isolated spot, and then plant only about ten colonies of bees near it, I think we would have comb honey from it in sections for a good long spell. Who will make this experiment? Another thing: This figwort seems to be wonderfully plastic in the hands of one who will love nature enough to study its pecularities. I have before mentioned an early variety that blooms even before white clover; and its great hardiness, and habit of pushing up its strong green shoots, even before the snow has gone at times, seems to promise that it may be made to yield the very first honey of the season, as well as the last. We have already had bees at work on it in May and November, and every intervening month. Another thing: In picking my way through the field one day (our patch down on the sandy creek bottom was a little roaring swamp, for the plants were higher than a field of tall corn), I found one stalk, or root, rather, bearing flowers of at least twice the ordinary size, and I at the time proposed to tie a blue ribbon around the stalk so as to save seed from it. It seemed to have honey in proportion to the size of the flower, and the bees seemed to like the large blossoms, as it was so much easier to get into them. In my mind there isn't a question but that this plant of the woods may be so cultivated as to enlarge its blossoms, just as much as our garden flowers have been enlarged over the wild plants. It should, however, be borne in mind that it is large globules of honey, rather than large showy blossoms, we are after. Yellow bands are very pretty, but honey-gatherers are prettier, to the bee-man who is in debt in the fall. I really do not know whether I can find that plant now or not. When it stops raining I will see. Possibly the seed-pods are enough larger for identification.

There seems to be something funny about the failures in getting the seeds to grow. It may not be so funny after all, to those who have fussed and failed. If you get some woods dirt and sand, perhaps half and half, and sow the seeds in a box, and keep the temperature right, with the air moist, I think you can raise them by the million, without fail. As a sash put over them keeps a moist air over them, I think it may be well, even indoors. They must not have too much sun. A soil that will bake over the top will not do at all, and there is where I think so many fail. Our creek-bottom sand seems to suit them exactly. This matter of improving the plant by selection, requires a great deal of time and care; and with all my business it is almost out of the question for me to attempt it. Will not some of our boys and girls attempt it? The sale of seed from improved plants will pay you well for the labor. I would set the plants exactly as corn is planted, and then give them corn treatment, and nothing more. Our plants almost invariably blossom the first season, with any sort of ordinary corn care. Those that were self-sown in the potato patch, from seed that I think ripened this season, are in blossom now, this 18th day of November. With such ground as that, I would simply prepare and mark out the ground exactly as for corn, and sow the seed, say one or two dozen seeds in a hill. Cultivate, hoe, and weed; and if some hills fail entirely, carry plants from those having many. This would save, in a great measure, the grievous task of setting out an acre of plants; and I tell you it *is* a grievous task, as I well know. The most I should fear would be the hot sun on the young plants; but if the seed was sown in April or May, I think it could be managed. You might have some plants in a hotbed, to "fall back on," as the woman said of her sewing-machine, if she failed in making her boarding-house "pay." The plants that I sold at 25 cents per hundred last spring did not pay me very well, nor our customers either. I am sure somebody in the plant business could make it pay, and send them without trouble. I can not possibly "spread" myself over so many things, and have them all do well. I often, of late, think of the poor old hen that tried to sit on 69 eggs (if that was the number). If I recollect rightly, there were some of them that did not hatch. I am inclined to think that God intended I should point out the way to these new avenues of work that open up so thickly, instead of trying to do every thing that comes up, myself. As soon as the roots start in the spring, down on that sandy ground, I will sell them for a penny each; and if by mail, about as much more for postage. Seed sown in the fall will come up in the spring, and, in fact, all through the summer. It does not seem to make much difference how old it is.

Melilot makes a much finer growth, when cultivated. I would plant an acre of Spider plants exactly as I would corn; and, so far as I know, the seed will grow almost as surely as corn. It wants just about the same temperature and soil that corn does. Put in 8 or 10 seeds, and transplant where they fail. By raising the plants in a hotbed, you could get blossoms a month earlier; but I hardly think it would pay for the extra labor. With the amount of both plants raised, I had supposed the seeds might this season be offered very low; but I do not see any offers less than those in our price list. Have I not covered all points, friend Miller?

A HOPEFUL A B C SCHOLAR.

NOW, my bee-keeping friends, I will give you a little of my experience. I have never written a word yet, though this is my third year in the bee business. Others have done the writing, and by their advice and directions I have profited much. I feel now that I ought to give in my experience. It may be of interest and profit to beginners at least. I commenced in 1879 with 4 box hives; transferred early in the season; three I ran for comb honey; got 50 lbs. to the hive. The other I increased to three; sold one, and went into winter-quarters with five, and came out with five. The next season I ran three for honey, and two for increase; got 200 lbs. surplus comb honey; increased to 12, all of which I wintered without loss. I have now 30 colonies of Italians, and will get about 60 lbs. from each of 6 colonies run for honey. I have sold some bees and queens each year, and have made the business pay from the beginning. I use the L. frame and chaff-packed hives. Some have Root chaff hives, which I like, and some have chaff only around lower story. I have never lost a stock of bees from any cause, except one that went to the woods. I read up pretty well before I tried to handle a bee, and this is what enabled me to succeed as I have. I commenced, expecting to employ all my time in the business, and now have no time for any thing else. I am pleased, and paid better than I possibly could be in any other business. It is a light and pleasant occupation, and I regard it as safe as any other business. It is true, we hear of great losses some seasons, but I am not alarmed. Last season was the hardest for many years, but I came through safely with each of my 12 stocks in good condition. I had them on 4 and 5 frames; 20 lbs. honey; chaff division-boards each side, winter passages in all the combs; chaff cushion on top. If I can have my bees in this shape, I don't fear loss.

I hope to increase to 50 colonies next season, which is all the bees I want. I can't properly care for more; 30 of these I shall run for honey; the rest for queen-rearing. West Virginia may not be as good for bees as some other States, but I think it a fair average. I can make an average of 60 lbs. of comb honey per stock, which satisfies me.

G. W. WILLIAMSON.

Willow Island, W. Va., Aug. 3, 1881.

ITEMS ON EARLY POLLEN AND HONEY.

SKUNK CABBAGE (SYMPLOCARPUS FŒTIDUS).

AS quite a little has been said during the last year about early pollen and honey, perhaps a few words more would not be amiss, for this early pollen and honey is what lays the foundation to our success during the season. The first plant producing pollen with us is skunk cabbage. The buds are all formed the season previous, in a small sheath about the size of a hen's egg, and upon the first approach of spring this pushes through the ground, and a small opening is made, by the sheath parting on one side so the bee can crawl in. Inside of this hollow shell is a tiny ball about the size of a marble, with little spikes covered with pollen standing out from it in all directions. The bees roll around in this shell and run over the ball, collecting pollen in their baskets without taking wing (the same as they manipulate propolis from an old bee-hive which stands in the sun), till they get a load, when out they crawl, often having more pollen on their backs than in their pollen-baskets, and away they go for home. I see friend McWilli (page 137, GLEANINGS) claims that skunk cabbage produces honey; and friend Root says, "It has been several times mentioned as a honey-plant." I think there must be a mistake somewhere, for after several examinations I never have been enabled to find a bee (leaving this plant) having any honey in her sack. Quinby, in his "Mysteries of Bee-Keeping" (page 78), says, speaking of skunk cabbage with other pollen-producing flowers, "These afford only pollen." It grows on moist soils, and after blossoming, puts out large cabbage-like leaves, which if broken smell very much like the animal from which it derives its name.

PUSSY WILLOW (SALIX).

Of this we have several kinds, which put out their blossoms quite irregularly. Some are a month earlier than others, and some of the buds on the same bush are ten days later than others. The kinds which seem to attract the bees most are the black willow, upon which the kilmonark is budded, and those which produce a long cone-like flower similar to the black willow. From these two kinds the bees obtain large quantities of pollen, but, as far as I can ascertain, no honey. They are so eager for it, that they sometimes cut the blossom to pieces and pack the anther in their pollen-baskets, as well as the pollen. The flowers are of a rich orange color, and consist of a center, out of which spring hundreds of little thread-like filaments, upon which the pollen is supported. It is very interesting to see the bees work on these flowers, as you can see their motions so plainly, as the tree or bush does not grow to be of much height. It naturally grows on low swampy ground; but with a little culture to start, will grow readily on dry ground. They grow readily from cuttings put in the ground in early spring, as does all of the willow tribe. The above are often set down as "honey-plants;" but according to Quinby, and my own observation, they produce no honey.

GOLDEN WILLOW (SALIX VITELLINA).

This and the white willow give us our first honey; but, contrary to the above, produces no pollen. When this is in blossom, and the weather is warm, the bees rush out of their hives at early dawn, and work on it all day long as eagerly as they do on basswood. The flowers are similar to those which grow on the birch, being of long tag-like shape, as large as a slate pencil, and from one to two inches in length. These tags secrete honey so profusely that it can many times be seen glistening in the morning sun, and the trees resound with the busy hum of bees from morning till night. From the few trees along a small creek near here, our bees frequently make a gain of 10 lbs. of honey. The honey is quite similar to apple honey, and of a nice aromatic flavor. The golden willow yields the most honey of any willow with which I am acquainted. On page 599, Vol. 8 of GLEANINGS, F. S. Paddock asks, "Which kind of willows are best as a bee plant, and how close should they be set for a fence?" The white willow is the kind used for fencing, and this kind also yields honey largely, but not quite so much as the golden willow. The cuttings are set 6 inches apart for a fence; and where kept trimmed, I know of no fence which presents a more beautiful appearance than does this. This is the most rapid growing kind of all the willow tribe, single shoots growing from 3 to 6 feet in a year. By trimming twice a year it is kept in good subjection. Thus in short I have given what light I can as regards very early pollen and honey, as well as willow for fencing.

G. M. DOOLITTLE.

Borodino, N. Y., Nov. 11, 1881.

The above facts are certainly of much value; and although contrary to my impressions in some respects, I presume friend D. is right. The common fence willow is in great profusion in our vicinity, but I have never seen many bees on it. I have never seen any willow that produces honey in such quantities as to be seen by the eye, as friend D. mentions, and I think that we can all of us have at least a few cuttings of this golden willow to test it, in our own localities. Will friend D. please state how low he can furnish us such cuttings; for by that means we may be sure we have the kind that produces the honey in such quantities? The willow-tree sent us last spring by friend Culp, of Hilliard, O., drew a larger number of bees than any other plant I think I ever met; but if friend D. is correct, this must have been for pollen only, and not honey. It strikes me just now, I should very much like a skunk cabbage on our grounds. As they grow in the woods near, I presume it will not prove a very expensive luxury.

Later.—From friend Doolittle's forthcoming price list, which is now issuing from our press, we answer our own question relative to price of willow cuttings:—

WILLOW CUTTINGS.

As our bee friends frequently inquire about willows for bees, we have concluded to send cuttings of the following varieties at 20 cts. per dozen by mail, postpaid. Cuttings 8 inches long, and from ⅛ to ⅜ inches in diameter Pussy willow, gives us early pollen for the bees, and is eagerly sought after by them. Golden willow yields honey in abundance; and if the weather is good, it helps the bees wonderfully. White willow also yields honey, and is the kind used for fencing. If kept trimmed it makes a handsome fence. The cuttings grow readily in moist soil, and will thrive in nearly any soil, if cultivated for the first year or two. Price per dozen, by mail, 20 cts.; per 100, by express, 50 cts,; per 1000, $4.00.

WINTERING, AND PREPARING FOR WINTER.

BY ONE WHO DOES WINTER HIS BEES.

IN the many excellent plans for wintering, given during the past few months, most of the writers, I believe, recommend that the bees be supplied with good honey. Does not this indicate that the quality of the honey is the most common cause of success or failure, supposing, of course, that the bees have plenty of it, and are in a normal condition otherwise; that is, have a good queen, and a sufficient force of healthy workers? I think it does, and have no doubt that the neglected hives of careless bee-keepeers, that survived the rigors of last winter, were those that had an opportunity of breeding up well late in the season, and had an accessible supply of good honey.

HONEY-DEW, BAD FOR WINTERING.

I understand good honey to be that which is gathered from flowers (not honey-dew), and is well ripened and sealed. My experience with honey-dew has convinced me that it is entirely unfit for wintering; from what I know of the bees that died in this locality, I am certain that black-walnut honey-dew and starvation killed the most of them.

I can not agree to what friend Heddon says on page 542, Nov. GLEANINGS, that "it seems that those who neglect their bees succeed in wintering as well as any." In all my acquaintance with the bee-keepers of this neighborhood, there is no greater old granny than myself about "fixing" his bees for winter, and none succeed in getting them through the winter better than myself; this is no doubt due to the fact, that the bees are supplied with an abundance of the best honey or syrup, within easy reach of the cluster.

I have not lost, during the past eight winters, one single colony, excepting in 1878-'79; then, owing to sickness in my family, I did not have time to take all the honey-dew out of some of my hives, and they were wintered partly on it and partly on syrup. These colonies were so seriously affected with dysentery as to make it necessary in the spring to reduce their number about one-half, by uniting; but no one died out entirely, and I sold all the surplus queens.

Our bees are snugly tucked away for winter, and have been so for over six weeks. There is no such thing at our house as the gambling excitement mentioned by friend Heddon, for I know to a certainty that next April they will be bright and healthy, ready for business; and to-night, as the wintry storm rattles against our windows, I think of them with as much satisfaction as I do of our faithful horse and Jersey cow in their comfortable quarters.

All but two colonies are in chaff hives. They are confined by close division-boards to from five to eight combs, and these are well filled with clover and linden honey and sugar syrup. All have winter passages. The entrances are contracted to ¼x1½ in. Pieces of old carpet or burlap cover the frames, while warm soft chaff cushions pressed down over all, confine the heat and absorb what moisture may escape from the bees.

There! I had almost forgotten this upward-ventilation business. Ever since I read, years ago, what our kind friend Mr. Langstroth tells us about it in his excellent book, my bees have had something of the kind. That which is supplied by the chaff cushions seems now to give the best results.

Our cushions are about four inches thick, and last winter, when the thermometer ranged from 10° to 20° for weeks at a time, they would have frost on the upper surface, while next to the bees they were dry and warm, and the bees and combs dry.

I have not found it neccessary to have any open space above the frames. "If you want to know how that feels to the bees, just hang your bed-clothes on the bed-posts some cold night."

Asking pardon for saying so much on this almost threadbare subject, may I suggest, friend Root, that if we would all faithfully follow your timely advice, and attend to our bees in September, just as you direct, making them breed up well by thorough feeding, and at the same time supply them with ample stores of good honey or syrup, that no dead bees would be reported, even if wintered in single-walled hives and on summer stands?

E. M. HAYHURST.

Kansas City, Mo., Nov. 15, 1881.

To those who are unacquainted with friend H., I would say, by way of adding weight to his advice and instruction, that he is, and always has been from the first, one of the successful ones. Not only does he succeed in raising and wintering bees, but he succeeds in raising fine queens, and getting them safely to their destination. More than all this, he succeeds, year after year, in doing business with a large number of people in such a way that none of them ever have any fault to find; at least, so far as my knowledge extends.

Juvenile Department.

Every girl or boy, under 12 years of age, who writes a letter for this department will receive one of David Cook's excellent 5-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from $1 00 to $1 50.

I LIKED my book real well. I have read it through, and have laid it away, to read when I get larger. I do not go to Sunday-school, for it is too far away, but I go to district school. I study the Fourth Reader, geography, grammar, spelling, and writing. Pa has kept bees for 13 years; he has never lost many until last winter. This is the first year pa has taken GLEANINGS, and he likes it very well. Pa has got 28 swarms of bees now; he had 33 swarms last fall, and lost them all but 9. I have 4 brothers, but no sisters. My little brother, 4 years old, likes bees; when they come into the house he takes them on his fingers and carries them outdoors. His name is Amos. Pa bought 4 queens this year; he bought 3 of them from you, and 1 from Mr. W. Z. Hutchinson. The one he got from Mr. Hutchinson was a $1.00 queen; she was all white, and she has her hive full of nice light bees now. The $3 00 one you sent us is nice too. There are not many of her bees out yet. If you will open the hive you will see some of them. I do not think much of bee-stings as a cure for rheumatism.

JENNIE E. STONER.

Merrimac, Sauk Co., Wis., Oct. 15, 1881.

A very good letter, friend Jennie. And so your brother's name is just like mine. Isn't it funny that it happened so? May be you haven't had the rheumatism yet. Little girls don't often have it. I am glad to hear your queens turned out so well.

My pa finished packing his bees to-day. They crowded on six and eight frames, with division-boards on each side of the brood-nest, one-fourth inch from the bottom; upper story filled with dry forest-leaves. I assist my father a great deal with his bees. I am a schoolgirl. ISABELLA WIER.

South River, Anne Arundel Co., Md., Nov. 4, 1881.

I am a little girl ten years old. My papa keeps bees. He has about 50 hives, and about 1500 lbs. of box honey. Papa takes GLEANINGS, and I like to read it. I have got one sister and one brother. My brother is three years old, and my sister is eight years old. NELLIE WORTH.

Reading Centre, Schuyler Co., N. Y., Nov. 5, 1881.

Thank you, Nellie. That is a very good little letter.

This is the first letter I have ever written, though I am eight years old. I have two sisters and one brother. My pa has kept bees for 15 years, and the most that he owned at a time was 40 colonies. Last fall he had 3, but lost 1 last winter. My pa takes GLEANINGS, and I like to read it. I think the pictures of Mr. Merrybanks and his neighbor are very funny. EVA DERR.

Indian Falls, Genesee Co., N. Y., Oct. 25, 1881.

I am a little girl 10 years old. I have three sisters and two brothers. My elder brother keeps bees. He had 40 swarms last summer, and lost 15 last winter. He gave my sister two swarms. His bees made 1400 lbs. of honey this summer. He got 15c per lb. for the comb honey; 17 for that in sections, and a shilling for the extracted. My sister has the picture of Blue Eyes. My brother takes GLEANINGS, and I like to read the Juvenile Department. He bought twelve glasses to put honey in, and gave me ten cents for washing them. I read in the Fourth Reader, and study geography, grammar, spelling, practical and mental arithmetic.

EMMA WAGNER.

Calamus, Clinton Co., Ia., Oct. 28, 1881.

Very good, friend Emma, but wasn't that a pretty big price; almost a cent apiece for washing the glasses?

MRS. HARRISON TALKS TO THE CHILDREN ABOUT CHRISTMAS.

I know what the juveniles are thinking about, and shouting out through your happy throats. "Christmas is coming! Santa Claus will soon be here!" The boys are wishing for sleds and skates; the girls, for dolls, books, and pictures. But there is one thing that boys and girls want just alike. Isn't it funny? It's money. Many of you are wishing, "Oh if I could only *earn* some money!" Yes, that is the way to enjoy it; earn it. I see some of you own hives of bees, but none of you have ever told us how much money you have made from them. I'm afraid that papa does the work, sells the honey, and, I'm almost afraid to say it, puts the money into his own pocket. If you are *real* bee-keepers, you will do the work for the bees, and sell the honey yourselves. You want to give presents, don't you? If father or mother gives you the money to buy with, it is they, and not you, who give it, is it not? You should keep a book account of your apiary, and tell us all about it, so we will find out whether bee-keepers are like farmers — "sonny's pig, but daddie's pork."

If you have money to spend, consider well before you do so. You give presents to your friends to make them happy, do you not? And the only way in which any of us can be made happy is in *our own way*. If you give a boy a doll, he might throw it at you in disgust; but if a knife or box of tools were given him he could hardly find words to express his delight if he were a boy of inventive turn; that is, one who likes to make things.

Some of you could earn Christmas money by working for Mr. Root getting subscribers for GLEANINGS. Some persons who do not care for bees themselves might be induced to send it as a Christmas present to a friend who does. A book would make them glad only once, while GLEANINGS would twelve times in a year, from Christmas to Christmas. You might take *The Youth's Companion* along too, and get subscribers for both, or some other good paper. Who among the Juveniles will make Mr. Root the largest Christmas present of a *big club* — of subscribers to GLEANINGS for 1882?

SOMETHING ABOUT PENMANSHIP.

I am pleased to see so many children writing for the Juvenile Department. I think you must write plainly, or the editor would not print your letters as he does. Very often when I receive a letter from an editor, lawyer, or minister, it takes the whole family to read it; but when a child writes to me, I can read it all alone by myself. Practice writing your own name and address, and make each letter so plain that grandpa can read it without specs. Sometimes I get a postal from some one who wants honey, and the name is written so poorly that I can not tell who wants it. The evenings are getting long now, and so you should practice writing, and perhaps Mr. Root will tell in GLEANINGS who does the best. MRS. L. HARRISON.

Peoria, Ill., Nov., 1881.

Many thanks, Mrs. H., not only for the kind words in regard to the circulation of GLEANINGS, but also about the matter of handwriting. I do believe it would be a good idea for a great many of the fathers to set the children writing the letters. Perhaps they might manage as I do here in the office. I take the letter I wish answered, and scrawl my answer on the back or margin just as hastily and awkwardly as I please. Of course, nobody could read it who wasn't schooled ("schooled" is the word, and I tell you it *is* a *school*), to read my crooked marks and abbreviations. Well, some of the girls in the office have so learned my characters that they read them right off, when *you* could scarcely read one word. Another advantage they have: they can read the letter first, and from their knowledge and experience in the business know pretty nearly what the answer would be, and so can easily write out the nice clean letters we send you. Mrs. H., do you ever have any trouble in reading the letters our girls send you? Those who have tried it can tell what an immense saving, to a busy man, the above plan is. I have nothing to do with names and addresses, and I often scrawl answers without knowing who wrote the letter at all. I might add, for the encouragement of our little girl writers, that our office is now *entirely* in charge of girls and women (one of them is now sweeping the floor, and they can sweep floors and clean lamps *almost* (?) as well as boys can), and I share to a considerable extent the pride they feel in letting the world know that women *can* do business. There are seven of them in this room now, and in a month or two we shall need several more probably.

Now about subscriptions. If you will remember to send the stamps for postage, I will make the following offers for subscribers: For the first name you send me with $1.00, any thing on the 3-cent counter. For the second, any thing on the 5-cent counter. For the third, any thing on the 10-cent counter. For the fourth, any thing on the 15-cent counter; and for the fifth, any 25-cent article. After you have sent five names, we will credit you with 25 cents on each name, to be taken in any thing in our price list, at the retail or single-article price. Please remember, this offer is given only to increase the circulation of GLEANINGS, and to pay you for the time and trouble it takes to show it and explain its merits to your bee-keeping friends. Be sure to tell what article you want, children, and *send the postage*. Big folks, or anybody else, may get subscribers on the same terms, if they wish to. Sample copies and price lists will be furnished free.

GOOD NEWS FROM H. A. BURCH.

THE following is from the *South Haven Messenger*, of Oct. 28: —

> BEES.— Since our last issue, Messrs. H. A. Burch & Co. shipped twenty-two colonies of Italian bees, consigned to parties in Michigan, Illinois, Indiana, Pennsylvania, and Canada. Since the first of last June this firm have shipped bees to 147 different persons, and out of this number they have not had a single complaint regarding the quality of the stock, which speaks well of their efforts to furnish bee-keepers with a superior strain of Italian bees. Will the "old and reliable" *Bee Journal* ask *Gleanings* to give this item his "prayerful consideration"?

Most gladly, friends of the *Messenger*, and with a "thank God" for it too.

Kindly allow me space in GLEANINGS to acknowledge the filling of my order for bees by H. A. Burch & Co., of South Haven, Mich. The order was placed in his hands about the 26th of May, and bees received in good order by me Oct. 18th, and beautiful Italians they are too. I might also say, that my order might have been filled earlier; but when not filled as promptly as I anticipated, I countermanded the order and asked him to refund the money. This also failing, I again, on the 11th of Oct., asked him to fill my original order, which he did, and that promptly too.

Would it not be well for friend Rose, of Grand Haven, to keep * * * * * * * * down the temperature? T. BOLES.

Ridgeway, Ont., Can., Nov. 2, 1881.

Mr. Burch sent me some bees Oct. 31; he sent 9 frames. I suppose they are short L. frames, which I will have to transfer. There was but little honey in two or three frames. I think there was about two quarts of bees. What do you think they are worth? JOHN E. RIGGS.

Newbern, Marion Co., Ia., Nov. 7, 1881.

STORING AND KEEPING COMB HONEY.

THE following from the *Colorado Farmer* was credited to the *Rural New Yorker*, and nothing more; but unless I mistake very much, it was written by our friend Doolittle. Perhaps you have heard the substance of it before, but it is matter that will bear repetition, without doing anybody any harm:—

CARE OF COMB HONEY.

Much has been written in regard to the best methods of securing large yields of honey, the hives best adapted to secure such a yield, etc., while but little has been said in regard to caring for such honey after it has been obtained. It is said that Mr. Durand, the strawberry propagator of New Jersey, obtains more money from his few rows of strawberries carefully tended, and put upon the market in fine condition, than is obtained from as many acres grown and sent to market by shiftless parties. We find the same thing occurring in regard to much produce which is sent to market, and honey is no exception to the rule. To place our honey upon the market in the best possible shape, therefore, should be the aim of every bee-keeper in the land.

If honey is left on the hives but a few days after being sealed over, its snowy whiteness will be changed to a yellowish white, by the bees running over it, thus spoiling it for a really fancy article. Hence he that wishes to get the first price for his honey will remove it from the hives as soon as sealed, and not leave it on till the end of the season, to save the trouble of going over the apiary more than once, as is the custom of some. I go over my yard once a week, removing all sealed boxes, and placing empty ones in their places, and consider this none too often. After taking the honey from the hives there are two more things to be looked after, or we may have but a second-rate article, no matter how white and nice it may be when first taken off. If stored in a damp and cool room, honey will take on dampness; and if left there long enough, it will become unsalable. How often we see honey becoming transparent and standing in drops on the surface of the combs, ready to leak on being handled the least bit, which not only hurts the looks of it very much but makes it liable to sour unless consumed very soon. While in New York in 1877, I saw in a damp cellar several hundred weight that had become so damp as to burst the cells and run over the crates, floor, etc. It smelt very bad, and was unsightly to behold.

To avoid a mishap like this, honey should be stored in a very warm, dry room as soon as taken from the hives, and left there for a month or more before it is crated preparatory to sending it to market. For this purpose I use a room seven by ten feet in the southwest corner of my shop, having the outside painted a dark color, so that the sun will make the room as warm as possible. The mercury in this room will stand from 90 to 100° most of the time, thus ripening the honey so that in a month's time it can be handled and turned over as much as I please, and not a drop will leak out, even from the uncapped cells at the edges of the box.

If kept thus warm, as nearly all practical apiarists of the present time claim it should be kept, the second trouble is quite likely soon to appear, which comes in the shape of the larvæ of the wax moth. Worms in the boxes an inch long and nearly as large as a pipe stem are not very tempting to a customer who is in search of a nice box of honey for his family, or perchance for a select party. These have been seen by the writer while looking over honey at different markets. To prevent such a state of affairs, the honey when taken from the hive should be placed on scantlings which should be raised a foot or more from the floor to permit the placing of burning sulphur underneath the pile, if the moth worm should be troublesome. Examine the honey every few days, and if you see many boxes with little white places resembling flour on the combs, you may know that the little worms have commenced to work and will eventually eat the sealing off, unless either they are killed by burning sulphur or their work is arrested by cold weather. To sulphur, get a pan of coals and set them in a kettle, or fix them in some way to prevent danger from fire, and when they are burning pour on them three-quarters of a pound of sulphur for every 200 cubic feet contained in the room. Sulphur the last thing before crating, and you may be sure your honey will not depreciate while staying in the market. Just how the eggs of the moth get in the boxes is not known. Some suppose the bees carry them there on their feet from walking over places where the miller has deposited them, while others think the miller gets access to the interior of the hive at certain times.

When thoroughly ripened and sulphured as above, the honey should be stored in crates made of nice white wood, holding about 25 lbs. each, with the gross weight and the weight of the crate plainly marked on each as well as the net weight. When honey is thus put up it will always bring the highest price in the market. If there is any difference in the honey it should be graded. I make three grades, putting none but that which is nice and white in No. 1. For No. 2, that which is mixed with buckwheat honey is used, as well as that built on old combs from which it is always darker than that from new. Buckwheat, goldenrod, and other fall honey goes as No. 3, as well as all combs which have once been occupied with brood. When all box honey in the United States is placed upon the market in the above-described condition, we shall have made a long stride toward a settled market value for our product, as there now is for most other productions.

RAMBLE NO. 8.

TO THE FOREST.

WE are admonished again by the recent visits of Jack Frost, that winter is once more rapidly descending upon us. The comfortable fire reminds us that the woodman will soon put his ax in order and march to the forest, and with a few sturdy strokes lay low the monarchs that have swayed their branches in the free air of heaven for a century or more.

At this season of the year, when the forest-leaves are tinted with those rich and variegated hues, and before the destroyer commences his work, we love to ramble up the mountain-side and note the changes of the year. The apiarist whose mind is upon tons of honey or scores of queens, will find much food for reflection beneath the trees. We find here the primitive home of the honey-bee, and the paradise for the bee-hunter. It seems now as though it ought to be a short step from the hollow log to the modern bee-hive; but, the movable frame was born only through many trials and experiments by many wise men.

We have learned that it is more economical to cut our tree into boards, and that the soft woods yield to our tools and make a better hive than the hard woods. We find that pine makes the best body to the hive; that locust gives us a better wood for the frame, for it finishes as smooth as glass, and holds a nail tenaciously. Basswood and poplar give us the snow-white sections for our surplus comb honey.

When those sections are being filled with the choicest gifts to the apiarist in the month of July, the eye is often turned toward the forest, and to those lofty tree-tops that rise like mounds above the general level of the forest. As the seasons roll round, you will miss, each year, a few of those mounds; the ax, the saw-mill, and the plane have converted your linden-tree and your bee-pasturage into articles for the use of man. Is it any wonder, then, that the apiarist should bestir himself, and plant for the future by his many visits to the forest? He has learned to improve upon nature, and plant his trees at such a distance apart as to give full development to the tree. In studying this development, another beauty is observed: The habits of growth of different trees. The linden has the form of a spheroid; the apple and cherry that of a sphere; the pear is the shape of a cone, and the locust approaches the cylinder in form. Out of these forms it is easy to figure an acreage of tree foliage. It is safe to double the surface measurement for blossoms on the interior branches. According to this estimate we have apple-trees over 60 years of age, ten of which are equal to an acre, while a splendid specimen of the linden, which, alas! has succumbed to the ax, gave fully a fourth of an acre of foliage.

Aside from honey production, the forest gives us many lessons for our improvement, and for the adornment of our homes. How eagerly are the lichens gathered up, and the running pine! Even the seeds of the linden are utilized to make beads; and when stained, they equal in appearance the strings of foreign nuts we saw at the Centennial. We love the forest with all its solitude and its treasures. We love the grand old trees that have been adding circle after circle to their circumference for a century or more; and as we return from our ramble we drop a sigh of regret for the noble trees that will fall before the ax before another year shall roll around. J. H. MARTIN.

Hartford, Washington Co., N. Y.

HOW TO TAKE OFF SECTIONS.

ALSO SOMETHING ABOUT HOW NOT TO DO IT.

THIS is my first season with the Simplicity hive, and I am well pleased with them. My neighbors are interested, at least those who keep bees, and say they are bound to have some of those hives.

I wish you would tell me how you take off sections. I put my first swarm, *and a good one*, into a Simplicity. They soon filled the hive, and I put on a case of sections, and they filled them all with the nicest honey I have seen for a long time. I waited for a cool morning, and tried to take them off, but the bees came pouring out in a perfect stream, and I put on the cover, and left them until evening; then I came at them with smoker and chisels, and pried the case loose, and got it off on the grass, but there was a small swarm in the case and on the bottom of it, and after much sweeping and driving, I set the case on an empty hive and gave them a little brimstone. That made things quiet so that I could take the sections out of the case. C. A. CASE.

Old Chatham, Columbia Co., N. Y., Oct. 17, 1881.

Why, friend C., who ever told you to choose a cold morning to take off sections? It was just your very worst time, for the bees were all at home, and in no mood to be disturbed at all. Have we not told you in the A B C, and everywhere else almost, to handle bees in the middle of the day, when as many were out in the fields as possible? At such a time, you could have lifted out all filled sections, and replaced them with empty ones, almost as fast as you could pick them up and set them down. If you are an A B C scholar, you should have taken out the sections and handled them often, so you would know just about the time the first one would be ready to take off. By waiting until evening, you had the bees all at home again, and they were likely just unloading and arranging the honey they had gathered during the day. If you wanted them clear out of the case, why did you put it on the grass at all? Had you raised up the case of sections, and placed an empty second story under it, right over the hive below, you could have driven every bee down on the brood-frames in a very little time with your smoker. The empty hive between them is needed, because without it they will boil up in one spot while you are driving them down in another. You had the empty hive right there, it seems; but instead of doing as I have suggested, you killed the poor little fellows with brimstone, as a recompense for their kind labor to their unthankful master. Please excuse me for the way in which I put it, but I can never bear to hear of bees being killed. I have almost felt like crying for them since reading your letter.

HIVES, QUEENS, ETC.

I HAVE noticed two things about handling bees in spring and fall and in cold weather. When bees are clustered together in cool weather, and you lift a frame out of a common hive, the bees that fall on to the bottom-board curl up, and very often never uncurl. In the chaff hives they don't do so.

PROTECTED BOTTOM-BOARDS.

Well, I made some boxes, and stuffed them with leaves for bottom-boards for other hives, and I found out that the bees did not curl up on them either, and we don't find the combs so moldy down on the bottom back corner, nor do the bees fly out so much if the hives are on stuffed bottom-boards in winter as they do if on common bottom-boards. When the stand is made by nailing boards on 6-inch scantling set up edgewise, and stuffed with leaves, I tell you they are just "bully."

Now I'll tell you why I don't like the Simplicity. It's too small to make a chaff hive of for winter. I have seen and used some Simplicities that just suit me; they are square inside. The front and back are packed with 3 inches of any thing to fill up; the bottom has 2 inches of packing; a light cap of half-inch stuff, 13 in. front, 11 in. back, covers the whole. A good thick chaff division-board on each side, and a 2-inch cushion on top, won't put them in good freezing condition. Well, 17 out of 18 stocks in them did not freeze last winter, and two-thirds all around them did freeze. The frames come just even with the top of the hive. Now for a plain square-top case on top of the hive, and two divisions below, and we have the advantge of the chaff hive and the square cases to tier up to keep wide frames, brood frames, or boxes, during the winter. Another thing: This chaff packing under the bottom-board helps to get the brood to the bottom of the frames early in the spring, and makes the same number of bees cover a greater surface of comb, furnishing more brood in the same time. Make the wide division-boards one side burlap; use the burlap side to the bees in winter, and the board side in summer.

ARTIFICIAL AND NATURAL QUEENS.

Well, now, don't you recollect that in 1878 and '79 you wrote about having the queen lay right in the cups, and then we could have natural queens started from the eggs, and see if they were not better? You asked who would try it. I sent you word that I would if you would, and I have for the past three seasons. When I sent you word, I believe I stated it was the hardest to *stop* them from laying in them, and so I find it. I find that there is not the least trouble in getting the queen to lay in the cups if you keep your stock moderately strong, and have the queen clipped; and you can quite often find a nice young queen hatching out or running around on the comb if you don't keep a very close watch; and I am obliged to say, that the queens so raised have both mated and laid quicker than those raised from brood, other things being equal. This is not from a cell occasionally, but 20 nuclei have been kept running half and half since the spring of '79, and queens have been put into full stocks side by side from these nuclei to try the difference, and there is but a small per cent of superiority in favor of the natural queens, and that is mostly size and gentleness. If I had not promised to report on the experiments I should never have penned the results, because I am convinced that it is very unsafe for any but experts or those who have had considerable experience with bees, to attempt to get cells in this way, on account of the dangers of swarming out, superseding, or killing off the queen when least expected. But in spite of the objections, cells can be practically obtained with either larvæ or capped over, and the old queen present all the time, and cells can be obtained from the middle of May till September. A B C class, don't run any risks with good queens, or you may lose them. EXPERIMENTALIST.

Oct. 22, 1881.

May I suggest, friend E., that with your Simplicity hive made larger, and packed, it would be a Simplicity hive no longer, for you could not put them one over the other, nor use them in any way you do the Simplicities. The Simplicity is a summer hive, and I do not believe it will pay to try to make a good winter hive of it. Your stuffed bottom-boards are no doubt a fine thing, but I think I should prefer having a complete chaff hive while I was about it.—If I am correct, the greater part of the testimony is to the effect that queens reared under the natural-swarming impulse are, as a rule, little if any better than those properly reared in other ways. The difficulty because of the tendency to natural swarming is quite an obstacle in the way of getting all our queen-cells in that way, as you say.

THE PHILOSOPHY OF VENTILATION.

DYSENTERY CURED IN MID-WINTER.

I BOUGHT a couple of hives that had dysentery so badly they were over half dead. In January I transferred them to the frame hive (they were in old box hives). I put warm brick in the hive, and got it pretty warm; heated the side cushions as hot as they would bear, and put the bees back (they had been in it three days). In the hive I put warm brick over them, and put some cobs in the upper story, and closed the hive so a bee cou' not get out. I went to the hive next day, and the cobs looked as if the hogs had been among them. I did this to those two hives once a week for three weeks; once when it was very cold. These two hives made me a surplus of over 100 lbs. per hive, and are strong yet. So much for a large upper story, the cube of which is (garret included) 5642 inches. Last, but not least, the hive should be set in a shed facing the south, as per Quinby. There is a great benefit derived from the solar rays in the long winter months.

My idea about a tight hive is something like this: I took two boxes, one open and the other tight. I put old damp cobs into each box. I went to them ten days after. In the tight box the cobs were all covered with frost, while the cobs in the open box were all dry. In about a week it turned quite warm. In the open box the temperature was 60° F.; in the tight one it was 30° F., and the cobs still covered with frost. Now, if a bee-hive is too close, and there is not enough air passes through to keep the combs dry, they will be covered with frost, or a cold damp sweat, which is worse on the bees. The draft should not be direct, as some want it; it should be as tight as a jug over the brood-nest.

I have experimented considerably with bees and hives, and this is some of my practical experience. I would like to tell you a little more about my hives, but I have not room, and must be as brief as possible. GEO. W. STITES.

Spring Sta., Ind., Oct., 1881.

I think, in your experiment with a box of cobs, you have hit the point exactly, friend S., and we owe you a vote of thanks for the experiment. If the space over the bees is so ventilated that the packing remains dry and free from frost, I hardly think there will be danger from dysentery, and certainly not with plenty of stores of good pure wholesome food.

UPS AND DOWNS OF AN A B C SCHOLAR;

AND HOW HE BEAT THE "OLD BEE-MAN" FINALLY.

I AM an A B C scholar. This is my second year. Last year I bought 11 swarms in all kinds of hives. I transferred and fixed them up as well as I could, and ran them up to 29 colonies. I did not get much surplus honey. May 1st, 1881, found me in possession of 16 swarms that had survived the winter — 10 good ones, 6 poor. All had queens but one. May 10th, a big storm of rain, hail, and wind, tipped over two swarms and killed the queens, and almost all of the bees, perhaps three-quarters of a pound in both hives. I looked through all of the rest and found 3 more queens gone, leaving me 11 with queens, 6 without. June 5th I had queens for all my hives. I had raised them myself. June 10, white clover in blossom.

Now for the result of the year's work: I extracted 1109 lbs.; had 237 lbs. section honey; got 12½c for extracted, and 15 for section honey, so you can see whether my bees have paid. I might have had more extracted honey, if I had had time to attend to the bees. I had only 150 lbs. of linden honey; that is, out of brood combs, and that was to give the queens a chance to lay. I wanted to be full of good honey for winter. I forgot to tell you that one of my friends, an old bee-man, told me that he was going to choose a colony, but he wanted me to, and he was going to beat me. So I showed him my hive. Now or that one hive: I extracted 49 lbs.; had 63¼ lbs. of section honey; divided and made 5 good colonies from it; have got three frames of honey, which I took out and put down for winter use, weighing 12¼ lbs. The whole amounts to over $40. How is that for high, and for an A B C scholar? I did not reckon in what I got from the young swarms. I got 33 lbs. from one; from two swarms, 44 lbs. extracted; and some from another, I don't know how much, but not a great deal. The last swarm, I sold. My bees are mostly the big brown bee; some hybrid, some Italians. You must excuse mistakes, for my little blue-eyed girl bothers me. D. SHANGLE.

Judd's Corners, Shiawassee Co., Mich.

Thank God you have a little "Blue Eyes" to bother you, friend S.; and thank him, too, that your efforts with the bees have eventually turned out so well. If you will excuse the liberty, I am afraid you are inclined to be a little careless sometimes; but with what you have accomplished, you now know what bees can do, and I think, too, that you see there is little probability that your other work is more important than your work with the bees. Will it not be just as well to say next year. that you had no time to attend to the other work, instead of saying that you did not have time to attend to the bees?

MRS. LUCINDA HARRISON ON BEE-STINGS AS A REMEDIAL AGENT.

ALSO SOMETHING ABOUT OTHER THINGS FOR "RHEUMATICS," ETC.

MR. EDITOR:—We have been watching with interest the discussions that have been in GLEANINGS in reference to the sting of the bee as a panacea for rheumatism. We know what rheumatism is. The Turks call it "wind in the bones;" but our relations have been so intimate that we have eaten salt together, and when we wished to dissolve the intimacy, it was like the fabled shirt, that, when once it was put on, could not be removed. And we have seen the spectacle of a doctor visiting rheumatic patients, who was a sufferer with it himself, to the extent that he could not draw the ribbons over his own horse. "Physician, cure thyself" first, would have been more in keeping with good common sense. During two seasons, in February and March, we had rheumatism to the extent that we were not able to dress our feet; we were accustomed to say to the little girl who did it for us, "You will not have to do it very long, for as soon as the weather is warm, and we work with the bees, and get stung, we can put them on;" and it was so. Our rheumatism was not cured, but relieved; whether it was owing to being stung, or working and perspiring freely in the warm sunshine, we are not able to say.

If we are not mistaken, physicians say that rheumatism is owing to the presence of urea in the blood, and as the poison of the bee acts upon the kidneys, we are of the opinion, formed from observation upon our own person, that it will relieve acute rheumatism somewhat. But the rheumatism that we will now describe is not, in our opinion, going to be cured by the stings of bees, any thing gently rubbed on the surface, or that passes down the throat. The ancients called this disease rheumatism, from *rheum*, to flow, as the mucous glands secreted an excess of fluids of an altered character. These fluids, in process of time, form a hardened substance on the bones and among the muscles, which, for lack of any other name, we will describe as *bones*. The flesh hardens, and you could just as easily pinch up cold pork with your fingers, as this rheumatic flesh; it is cold, and the bones and marrow also. Sometimes the cords and sinews are all knotted up, like tarred rope, and the afflicted person can not straighten his limbs or arms. In our travels this summer we providentially met a person who had learned to crush these bones, or "critters," as he called them, and work the hardened flesh until it was soft and natural, and straighten out the knotted cords. The treatment was as follows: The body was first thoroughly washed with warm soft water, and a mixture, composed of castile soap, saltpeter, and hartshorn. Then the doctor rubbed in oil on a small portion of the body, and worked and rubbed until the oil was absorbed. When he found one of these "bones" he used great pressure and crushed them. When he was working one of these hard substances, it felt as if a jagged bone was cutting through the raw flesh. The treatment was torture, and very excruciating, but we stood it for seven hours a day. The result of this treatment was softened flesh, limber joints, and increased circulation, which gives warmth and good feeling. No person but one of a strong will would endure to have knotted cords worked for hours until they are straightened. My rheumatic readers, do not stop moving as long as your limbs or arms obey your will; for, as a general thing, when a rheumatic stops he stays stopped as long as he lives, and another's legs has to do his walking and bidding. A few years since we had dropsy, and could not wear our accustomed clothing. We took no medicine, as it and us had a fall out many years since, and we have never kissed and made up, and are not likely to. It was winter, and as spring came on we moved our bees into clean hives, and let the bees sting us whenever inclined. It was very hard work for us to get around, and carry so much water, but we kept on working in the sunshine, and as it was so hard to do, it caused us to perspire freely; and before hot weather our dropsy had entirely disappeared, and has never troubled us since. Bee-keeping is just the thing that rheumatics, and those dropsically inclined, need to hustle them around lively. MRS. L. HARRISON.

Peoria, Illinois.

I am very glad indeed to get an article like the above, from one whose opinion will have the weight that any thing does coming from our good friend Mrs. Lucinda Harrison. I feel sure the time is coming when physic and drugs for human ailments will, a great portion of it, be laid aside, just as our doctors have now laid aside the practice of blood-letting, of a century ago. The evidence in favor of bee-stings, for some forms of rheumatism at least, is now almost beyond controversy, and we are almost if not quite as sure in regard to dropsy, as will be seen from this number and our last. I am strongly inclined, however, to lay great stress on the advantage of working in the sun and open air, so as to perspire freely. I would suggest to Mrs. L., that, instead of waiting for spring, she have a greenhouse where she can have the sun for a good many hours in the day, even if she can not have the bees. I should not be at all surprised if she might have the bees too, every day the sun shines in winter, ere many winters more pass. The demand for early queens is getting to be too great to allow of the idea slumbering very much longer, of flying and raising bees under glass. It is not only the rheumatic ones who want to "keep moving," but it is advice I think the most of us need. Mrs. L., I pray that when the kind Father sees fit to call you from this life you may be permitted to die without being troubled by *very much* medicine.

FRIEND McNEILL'S REPORT.

BEES AND BEE SUPPLIES AT FAIRS, AND HOW TO FIX THEM.

FRIEND ROOT: — I herewith hand in my report for 1881. Number of hives in the spring, 9 — all weak; four so very weak that I believe I could have held all the bees in each of them in one hand. The others would average perhaps a quart. The honey season opened early. Indeed, I found my bees doing a rushing business before there was any bloom whatever. One of my box-hive neighbors lost about 20 during the winter, and another 10; and I found that this early flow of honey was due to this fact, and to the negligence of the afore-mentioned neighbors.

First pollen was gathered April 20, and from this time till after buckwheat bloom there was a continuous growth in my little apiary. It was my purpose to build up my only two hives of blacks into strong colonies as early as practicable, and then break them up into nuclei; getting my increase from these and my honey from the other seven, which I intended should not swarm at all. But my purpose did not seem to be in accord with their ideas of how their family affairs should be conducted; for while still having plenty of room for brood and honey, I found them starting queen-cells early in June. They soon began to swarm, and they continued to swarm regardless of my efforts in their behalf, till, by natural and artificial increase, I had 25 colonies.

With such an increase I looked for little honey, and visions of sugar buying to build them up, and give them sufficient stores for winter, floated unpleasantly through my brain. But the honey season held on bravely, and my colonies, big and little, grew and throve. Early in August I emptied my surplus combs, and found, greatly to my surprise, that my crop of early honey amounted to 650 lbs. mostly extracted. The empty combs were replaced just in the beginning of buckwheat bloom, and they were filled again with this aromatic sweet. A 42-gallon barrel has failed to hold my buckwheat crop. I reckon my honey crop for the season at 1125 lbs., or an average of 125 lbs. to each of the original nine in the spring.

Beginning a year ago last spring, with three colonies of blacks, the fall found me with eight and $60.00 on the debtor side of my bee account, and not a cent on the other. This season has added about $100 more to the debtor side; but when my honey is all sold I expect to have my bee account balanced.

As there is little known of advanced bee culture in this section, I thought I would be doing the community a service which they would appreciate, by making an apiarian display at our county fair. My exhibit consisted of a two-story Simplicity hive complete; a frame of fdn., one just drawn out into cells, and one full of honey; a brood frame of sections with fdn. starters, and one with sections filled with honey, and a frame with queen-cells and hatching brood. Then, of course, I had my extractor and honey knife; also a Peet introducing cage, a smoker, samples of extracted honey, and a frame of Italians with queen in the two-frame nucleus hive, which I got from you last year. I cut out the sides of this hive, and fitted in two 8x16 panes of glass. This gave a complete view of both sides of the comb, and as I purposely left but few bees on the comb, it was not a difficult matter to get a view of the queen. And just here let me remark to any of our bee-keeping friends who purpose making a display of this of this sort, don't neglect to have a queen in the bill. She will prove a *star*, sure.

I think I have been well repaid for the time and trouble which my exhibit cost me, in the expressions of pleasure and satisfaction which it called forth from the many to whom I explained the wonder of the bee-hive, and the methods of advanced bee culture. JAMES McNEILL.

Hudson, N. Y., Nov. 1, 1881.

FRIEND TIMMERMAN'S IDEAS ON SEVERAL POINTS.

I HAVE been keeping bees 21 years in New York and Iowa; have used Quinby's old-style box hives; have been invited by patent-right men to invest in movable frames, but I "got bit" on a patent right years ago in New York State, and I would never hear of nor look at one again.

I have 61 stands of bees. Last winter and spring I lost 31 out of 70. In box honey my bees average from nothing up to 50 lbs. It seems strange to see others in GLEANINGS have such large yields. In future I will adopt the Simplicity, but I don't like the idea of transferring.

HOW FAR WILL BEES GO FOR HONEY?

I once disputed with Hammond, a bee-keeper in Fayette, as to whether his bees were flying past my house, four miles out of town. He came up, and he owned up. We investigated, and found they went three miles further, working on a large field of buckwheat. I live on a prairie, two miles from timber on the north-west; east, timber is five miles off. Now, in basswood time my bees circle about until they are 50 feet high, and more go east than any other way.

WHERE DO ABSCONDING SWARMS GO?

In swarming time, timber bees come out of timber, fly across the prairie, and cluster in artificial groves. White clover is plenty on the prairie. In basswood time my runaways go to the timber every time.

WILL BEES GATHER HONEY FROM CORN?

Yes, and lots of it too, sometimes. They gather it from the tassels at the same time they gather that dark-green pollen. I always know what my bees are working on. It is not every year they get a large amount, say about as often as one year in four or five. I have had them average from 5 to 10 lbs. per swarm of the nicest honey. It comes after basswood.

WILL BEE-MOTH LIVE ON CLEAR WAX?

Yes, and come to maturity in a box of honey; eating the cappings (but not so as to daub or get in the honey), spinning their web all over the honey, the same as in a hive. No miller ever got in said box, as it was pasted up tight and placed in a dark and tight closet.

Last year I helped a brother-in-law extract honey. He had six swarms in movable frames; one was a double swarm. It gave 20 lbs. at five different times; first, clover honey; next, basswood, corn, goldenrod, buckwheat. We could tell what it was at each extracting as easily as we could tell basswood honey from buckwheat.

Bees have been dying for three years now; our greatest loss was in the last of April. Warm weather set the bees brooding. A few cold days they could not fly to get water to reduce the honey properly for the brood; brood died in comb; bees would swarm out as in swarming time, leaving, sometimes, thirty and forty lbs. of honey. I hived eight one day, but saved only one. They dwindled to nothing, placed in hives that died out in winter.

FRED TIMMERMAN.

Fayette, Fayette Co., Ia., Oct. 31, 1881.

I presume bees on the prairie will fly much further than usual, but still I think there must be some mistake about their flying as far as seven miles: 3½ miles is as far as we have been able to find Italians working from their hives, when the first ones were brought to our county.—I presume that on the prairie, swarms would of course go for the timber.—I think, friend T., the moth you speak of used some honey with the cappings; but if you look closely, I think you will find now and then a little pollen that started them on the comb honey.—I guess April is the worst month with most of us.

CAN WE GET PURE DRONES FROM AN ITALIAN QUEEN MATED WITH A BLACK DRONE?

AN OLD QUESTION BROUGHT UP AGAIN.

FRIEND ROOT:—The question of purity of the Italian bee, and the test to determine the same, has been the cause of frequent discussion; but the matter of keeping up that purity is, I think, not yet fully understood; at least, too much dependence has been placed upon the "Dzierzon Theory," and our queens have been allowed to meet indiscriminately, with the drone progeny of pure queens mated with black drones, the idea having heretofore been conveyed that such mating does not affect the purity of the drone. Now, why should it not? It is an established fact, that a single cross among mammals for ever after precludes the possibility of the mother producing her like in absolute purity. In our domestic fowls even, it is now admitted by our best breeders, that a single mismating of one breed spoils the mother, and that she can never again be depended upon for pure stock; and so it goes through the whole field of animate nature, so far as comparative anatomy yet shows, and so, I say, why should it not be so with the honey-bee? It is unquestionably true, that a virgin queen may produce drone progeny, and that the office of fertilization is solely to enable such queen to produce workers; but can we say positively, that, even if such is the case, and that the drone egg is not fertilized by any contact with the contents of the spermatheca, that the mother is not, by this connection, so far changed in her being, by reason of absorption, or some other result of the cohabitation, that her drone progeny are not to some (no matter how slight) extent affected by the cross? It may be that the effect is slight; still, if it continues it will necessarily increase until at last we find impurity where we have every reason, as we now understand the matter, to expect absolute purity. As a matter of caution, therefore, I would advise that, in order to keep the Italian bee in absolute purity, we should not allow any admixture with drone progeny of a hybridized queen. This matter is, I think, one of considerable importance, and I trust that it may call out discussion, and cause experiments, until the truth is certainly (if possible) established. I may be wholly wrong in the idea I present; but if I am, I am certainly borne out in it by experimental results in the higher races; and if it can be shown by any proof that I am not now right, I shall be most happy to admit my error, and take a back seat.

J. E. POND, JR.

Foxboro, Norfolk Co., Mass., Oct. 27, 1881.

Friend P. has given me one fact in the above that is new; viz., that a common fowl, once impregnated, will never entirely recover from it, for pure breeding purposes. I am not so much astonished at this, for we know that, as a single impregnation affects the offspring for several weeks, we are rather obliged to conclude that the impregnating fluid remains in some receptacle, from which it is drawn daily, or as often as an egg is laid. Every egg the fowl lays receives some of this fluid; but with the queen bee, the anatomy is so different that eggs may be laid without receiving any of this fluid at all. So much for theory. Well, we are buying black bees from the farmers of Medina county every season, and second and third swarms having unfertilized black queens are brought us in great numbers. These are fertilized by the Italian drones of our apiary, and produce variously marked hybrid workers, but the drones are common black, with no trace of Italian blood. This is a test any of you can make. Get a young black queen, or queens, and put them where you are pretty sure they will meet Italian drones. Now, if you find it is the workers only, and never the drones, that are changed by the crossing, have you not proven the Dzierzon theory pretty well?

WINTERING BEES.

FIRST, they should be so wintered, if possible, as to prevent spring dwindling.

Now, it is plain, I think, that the only sure way of doing this is to promote breeding late in the fall and as early as February in the winter. This has been suggested by friend Langstroth. But young bees can not be raised without *pollen;* therefore, bees can not be wintered so as certainly to prevent spring dwindling without having *plenty of pollen.* This explains, in part, I think, why bees have been wintered safely on grape sugar, the *starch* it contains serving the purpose of pollen. But for this purpose I prefer flour candy to any other bee-feed whatever. Now, friend Langstroth contends that the starch in grape sugar killed your bees last winter; but if so, pollen and flour will certainly kill them; and it is of no use trying to prevent spring dwindling by raising young bees in the winter, as Mr. Langstroth suggests. In other words, his idea, that the starch in grape sugar is not good feed for winter, contradicts his idea, that the best way to winter bees is to promote winter breeding. Moreover, if it is true that "starch and sugar are, chemically speaking, almost identical" (as you said in GLEANINGS, November, 1878), it is not easy to see how sugar is equal to the best honey, and the "almost identical" starch is dangerous.

Second. The bees should be put on 6 combs; the outside ones half an inch from the sides of the hive, and the other 4, 1¾ inches apart; strips 3 inches apart on the top of the frames for passages for the bees; over these should be placed a quilt, or other cover which will keep in the heat from the bees, and let out all dampness. This is best secured,—

Thirdly, by ample ventilation.

Let the entrance be as large in winter as in summer, without any chaff cushion over the bees in the second story.

Fourth. Shade the entrance of the hive from the rays of the sun, so that the inside of the hive shall be as dark as possible. In a word, the conditions of successful wintering are, I think, complete dryness, total darkness, or as near it as possible, and ample ventilation, with room between the combs for a good swarm to cluster; for live bees are warmer than chaff. Thus arranged, they can, I think, breed easily and safely in the winter, and be strong in the spring; but only with the blessing of God.

JOSEPH SMITH.

Hickory Hill, Pa., Oct. 29, 1881.

It seems to me, friend S., that you and some others are falling into an error, in thinking grape sugar contains starch. A recent newspaper item, in giving tests for the adulteration of sugar, said that, if dissolved in a little water in a glass, the presence of grape sugar would be seen by cloudiness of the starch contained in the grape sugar. This is utter nonsense. Pure grape sugar contains no starch whatever, and dissolves in water as perfectly as cane sugar. True, it is made from corn starch; but it does not necessarily contain starch, any more than whisky contains corn.—I can not quite agree that it is so very necessary for bees to rear brood very late in the fall, nor very early in the spring. We have had stocks without brood from Nov. 1st until April 1st, and they did very well.

GETTING BEES OUT OF A TREE, ETC.

MY red-clover nucleus (three frame) I got of you last year came through the winter outdoors in one of the Root chaff hives, but in a weak condition; they did not have any honey after the first of January. I fed them granulated-sugar candy. This season they have filled 6 frames with honey; filled the hive with bees, and about 20 lbs. box honey. I found a bee-tree the 28th of July when I was coming home from Sherburne. A friend gave me the line of a swarm of bees that went off; and, it being in the direction of our house, or nearly so, I took the line and found the tree about 60 rods from our house. The bees went about a mile. They went in the tree about 8 feet from the ground. The 30th of July, toward night, I bored a hole above and below the bees; fastened a box over the hole where the bees entered the tree, and tried to smoke them out, but it was no go; not a bee would go in the box. Then I sawed into the tree, just below the bees, and then again 18 or 20 inches above; split the chunk out, then another above about 3 feet in length, and had a good chance to get the honey. I think I got about 50 lbs. I took the brood comb, inserted it in your metal-cornered frames with all of the honey-comb that I could make stay, and put them into a chaff hive that night. The next morning, as soon as light, I went to the tree and found about two-thirds of the bees in a bunch on the ground; the rest in the upper part of the hollow of the tree. I placed the box over those on the ground; smoked them up in the box; took them home and put them in the hive; carried the box back, and tried to hive the rest, but "no go." I had to saw the tree down, and left them until evening, when I found them in the box hive there with the others. They proved to be queenless, so I sent to G. M. Doolittle and got one of his choice queens; received her last Thursday night at 9 o'clock; placed the cage on the frames Friday morning, and left them until night. I let the queen out, and up she went. My little girl Lutie said, "Pa, she is gone." I told her she would come back, and she did. I caught her and put her on the frames. The bees (a few) met her; they passed their salutations, and then went down. I looked for her Saturday evening, and she was all right. That was my first experience in introducing queens. I shall have to feed the honey I got out of the tree, back to the swarm, as bees have got through making honey this season, for there is no honey in the buckwheat, as it is so dry. There is no red clover; cause, grasshoppers and dry spell.

WM. TRACY.

Sherburne, Chenango Co., N. Y., Aug. 22, 1881.

P. S.—C. F. Smith, of Smyrna, has taken 163 lbs. of section honey from one of the Root chaff hives this season. We call that pretty good. W. T.

A BOOM FROM WISCONSIN.

OVER 500 LBS. FROM A SINGLE COLONY, AND ONLY A NUCLEUS AT THAT.

I RECEIVED the glass which I ordered from you, two days ago, after six weeks from the time I ordered it. Still, I am satisfied. I saved on the two boxes of glass exactly three dollars.

Bees have done very well here. I had 25 colonies in the spring for honey. I put 8 for extracting, and 7 for box honey. I received 1893 lbs. light extracted honey, and 1214 lbs. dark extracted; 2027 lbs. light comb honey, and 893 lbs. dark comb honey—a total of 6027 lbs. My average was 241 lbs. per colony. A neighboring bee-keeper averaged, from 24 colonies in the spring, 234 lbs., all extracted but 400 lbs. I have now 92 colonies in good condition for winter.

One colony with its increase (one swarm) brought me 506 lbs. box honey, and 10 solid Langstroth frames of honey, besides plenty of winter stores. The old hive brought me 308 lbs., and the swarm 198 lbs., and the 10 frames of honey.

I had one colony which was very weak—not more than a 2-frame nucleus; it was astonishing how that colony picked up. I added frame after frame, till the hive was full; then I put it on the scales; put on an upper story, and after a while another story. This colony brought me, as shown by the scales, 565 lbs. of honey. Many days during clover bloom it brought 12, 13, and 14 lbs., and on July 6th, 18½, and the next day, 17½ lbs. During fall bloom, the most they brought in one day was 9 lbs. Buckwheat did not yield well this year.

H. NEUHAUS.

Burlington, Wis., Oct. 17, 1881.

What do you think of that, boys? I have not a doubt but that friend N. has been through discouragements and troubles, like many of the rest of you who have lately been thinking of giving up bee-keeping because it "don't pay." Have *all* your neighbors had large yields this year, friend N.?

Ladies' Department.

BEE-MEN AS A CLASS.

As it is nearing the time to renew our subscription to Gleanings, which seems indispensable, I want again to give my husband a pleasant surprise. Your paper comes the very day, always, on which it is looked for, and read and reread with pleasure and profit. I have often wanted to ask you privately if you do not think if the reports given now and then of such wonderful yields are rather extravagant. I must say, they stagger us unless the bees get it by robbing, which may be carried on more extensively than any one imagines. They are sly little fellows, and have very little conscience. Mr. Mattison packed his hives for winter some time ago, taking good care to give plenty of ventilation on top—something he had before neglected. Now he has the chaff between the walls of the hives instead of large bags of it on top of the bees. The weather in this entire region has been very hot and dry, which, together with an extremely cold winter and late spring, has made it quite a bad year for honey. It was heart-aching work to read of such losses of bees as was so generally sustained last winter; but I have become quite an admirer of "*bee-men*," as they seem to be such a good-natured set of fellows, taking the ups and downs of life so coolly; even in Blasted Hopes they still work on, having, as one remarked, "some hopes that were not blasted." Success to the great industry, of giving such a choice luxury to the world.

Emeline Mattison.

Ocean View, Cape May Co., N. J., Oct., 1881.

Now, my very good friend, that is a rare compliment you pay our sex; or if you mean, by the term "bee-men," "bee-women" too, it is a fine compliment to the fraternity. I believe you are right, and that our people are not only hopeful, but "right smart" almost every way.—I am sorry your faith is not a little stronger in regard to these large yields. Please bear in mind that it is not all due to the owner of the bees, but it seems as if a kind Providence delighted in showering down great big rewards, once in a while, to those who have been patient, and have suffered disappointment long. Therefore, my good friend, be hopeful; and when a great flood of honey shall be sent you, just be in readiness to receive it.—If I am correct, robbers among bees, as well as among men, are never great workers.

DOES BUCKWHEAT MAKE BEES VENOMOUS?

The article, "Bees on a Rampage," in September number of Gleanings, reminded me of something I have read. The writer had visited a man who kept bees, and found the bees so cross it was not safe to go near them. The gentleman told him to come the next day, and he would show him his bees. The next day he found the bees perfectly gentle and harmless. The gentleman's explanation was, that his bees had been at work in the buckwheat, and were full of "pizen." From that article I inferred that buckwheat has a tendency to make bees peculiarly venomous. I suppose old bee-keepers can tell whether it is so.

MEDICINAL VALUE OF BEES.

Concerning bees as a medicine: A friend of mine some years ago suffered some time from gravel, and doctors' medicine did her no good. Some one recommended bee tea. The number of bees was to be seven. They were obtained, and her intense suffering was relieved almost the instant she swallowed the tea.

Mrs. A. Knowlton.

Saunemin, Livingston Co., Ill., Oct., 1881.

I can hardly think that buckwheat has any tendency to make bees venomous; but as the bees usually work at it only in the morning or fore part of the day, they are quite apt to get to robbing in the afternoon, especially if the weather is quite warm and dry. The visitor very likely came at a time when the bees had been robbing, and of course it was not a very convenient time then to show them. By the next morning, however, they would be all over it, and their owner could then show them without trouble.—Upon inquiry of one of our best physicians, I find that the poison from the sting of the bee is one of their most potent remedies for a certain class of diseases.

GOING TO CONVENTIONS.

As we entered the hall at Lexington, Ky., where the convention was in session, we looked to see who was present that we knew. Failing to see A. I. Root, we thought it takes time and money to attend conventions; and while we are here working to promote interest in bee culture, he is at home making money. We beat the bushes, while he catches the game.

Mrs. L. Harrison.

Peoria, Ill., Oct., 1881.

Now, Mrs. H., I protest. How do you know I am not at home shaking bushes, just on purpose to make birds fly all over the land to conventions? I am pretty certain, any way, that some of the fine birds, brought into the conventions by our bright boys and girls, were first started out by some of our friends who stay at home and keep to work a great deal. I tell you there's a "power of bushes" round our ranche that need shaking very often.

MARRIAGES OF BEE FOLKS.

BEDELL—ALLEN.—On Wednesday, Oct. 26, 1881, by the Rev. T. R. Faurit Le Roy, at the bride's residence, J. D. Bedell and Miss Sophie E. Allen, both of the parish of St. Mary, La. No Cards.

Friend Root:—By this mail I send you a small piece of my wedding cake; and as I have received so much assistance from you, and succeeded so well in bee-keeping, I should like you to publish my marriage notice in your journal.

J. D. Bedell.

Franklin, La., Oct. 27, 1881.

I do not know but that the above is a bad precedent, dear friends; but as it was accompanied by a box of wedding cake, my wife and I will try to stand our part. I do not mean that getting married is a bad precedent, but only the putting it in a bee journal; and even then, if it should induce some of our single blessed friends (they know who I mean, without my looking their way) to get themselves wives, and "bee," somebody, I do not know what hurt it would do. Well, who among our contributors will be married next? Friend Bedell, the Bible says,—

> By this shall all men know that ye are my disciples, if ye have love one to another.—John 13:35.

Now may it be known among all men, that you and your new wife are Christians in the true sense of the word, because you have love one for another.

Heads of Grain,

From Different Fields.

GOOD AND POOR QUEENS; A PLEASED A B C SCHOLAR.

I THOUGHT to myself you would like to hear from "her majesty" the Italian queen I sent to you for. I can say of a truth, she is "business," and more too. The 15th of last month was the time I introduced her, and since that time she has made me a good strong colony; before, there was not enough to make a corporal's guard. Well, I gave them a half-inch entrance, and they now fill the full entrance. I never thought there could be such a difference in the hum of a lazy queen and one that is full of business. It seems as though she said, "Now you 'git.'" Well, they have been "gitting" ever since I introduced her. Why, there is as much difference in the hum as there is in a dull and sharp cutting-knife. Now, then, I return thanks for goodness, mercy, and truth. May you live long to be a blessing to our country, is the prayer of your well-wisher,— H. B. POMEROY.

Fayette, Fulton Co., O., Oct. 15, 1881.

DO BEES PAY?

Last fall I put into winter-quarters 18 stocks of black (or rather brown) bees, part in chaff hives, part in Simplicity, inclosed in clamp, and packed round with chaff, and two in box hives set in a large box filled around with chaff. Lost one Simplicity. I think the loss of this one was caused by too late tampering in the fall. Started in the spring with 17 in good condition, except two of the Simplicities, which were rather weak. Fed some rye meal in the spring as soon as the bees would work on it. Doubled my number of stocks by natural swarming, and secured 1750 lbs. of comb honey, mostly clover, all in 1-lb boxes. I worked my hives for side and top storing; used fdn. for starters in brood frames, and surplus boxes about 1 in. wide; sold some of my honey near home for 21 cts. per lb., and sent the rest to New York, and received 20 cts. per lb. for nearly all the clover, and 18 cts. per lb. for buckwheat. I have sold all the bees I have to spare, at my own price. I commenced house-keeping 4 years ago, and bee-keeping one year later, with one box hive, which my father gave my wife. I sold about $60.00 worth of honey previous to this year. I have your A B C, and take GLEANINGS and *Bee-Keeper's Magazine*, all of which I read, and thank God for my success. W. A. GREGG.

Callicoon Depot, Sullivan Co., N. Y., Oct. 15, 1881.

A NEW WAY OF SENDING QUEENS IN COLD WEATHER.

Our friend D. A. Jones sent us a telegram for 10 one-dollar queens. Having just received 15 from W. W. Cary, of Coleraine, Mass., put up in a novel manner, we sent them right along on their second long trip. Here is the report:—

Queens arrived in first-class order, every one lively. Please accept thanks for promptness.

D. A. JONES,
Beeton, Ont., Can., Oct. 29, 1881. Per H. C.

Well, we have since received from friend Jones an order for 10 more. The Cary plan is as follows: The queens were put separately into the old-fashioned cylindrical wire-cloth cages, without a particle of food. These cages were put into a little nucleus hive, or shipping-box, between combs of sealed honey. The box was then filled full of live bees. We are going to try the second ten, put up in the same way.

ALL IS WELL THAT ENDS WELL.

I see bad reports from all parts of the world, on the honey crop this year, and you would not expect a good report from one who was in Blasted Hopes last fall. You advised me not to buy those 15 colonies last fall, but I did, and wintered all successfully; got 20 gallons extracted, and 100 lbs. comb honey, and have 25 colonies in good condition for winter.

BUCKWHEAT.

We had the longest dry spell here since 1853 or '4 — only one rain between May 1st and Sept. 24th; but we had a big buckwheat patch in the marsh where it was only about one foot to water, and our bees worked very well all the time. LEE WARNER.

Allison, Lawrence Co., Ill., Oct. 19, 1881.

I am glad you did not take my advice, friend W., but still I did not feel I should be doing right to advise a beginner to make such a purchase, more particularly while I knew so little about him. It has been said that supply dealers are always urging every one to go into bee culture, even where they know the chances are greatly that it will prove a failure. On this account I have been pretty cautious in advising such investments.—Did you get much grain from your marsh buckwheat? Our farmers about here say we must not have a rich piece of ground, or buckwheat will all grow to straw and fall down. I should be very glad indeed for an able article on the cultivation of buckwheat, both for grain and honey.

LIME VALLEY APIARY; SECOND ANNUAL REPORT.

The spring of 1881 left us only 14 colonies out of 21, put into the cellar in the fall of 1880. One of those was sold to a neighbor; two proved to be queenless. A part of them were run for comb honey in section boxes, and the remainder for extracted honey in upper stories. Increased to 18 during the season — only one natural swarm — and obtained only 120 lbs. box honey and 221½ lbs. extracted.

The season has been very poor in this part of Iowa. White clover amounted to nothing, on account of too much rain during the season of bloom. Basswood was scarcely better. Hardly any surplus was stored till the latter part of August. The fall yield would have been good but for too much rain again. We had no frost to kill flowers until Oct. 12th, but rain, rain, rain, as in the days of Noah. It was not only impossible for man or beast to travel, but the "bee-lines" were down, and the nectar entirely too aqueous. To sum up, the bees got just enough honey to increase rapidly, and not enough to store surplus. Those who worked only for increase had good success.

The demand for honey in this part of the country will greatly exceed the supply. I find the section box weighing 1 or 1½ lbs. to be best for comb, and a tin can holding about 3 lbs. very good for extracted. I think honey-pails would be just the thing if they could be got here without costing too much. Every package, whether comb or extracted, should have a label giving the name of the producer. It will advertise his business, if properly conducted. I inclose a label used by me for tin cans, stuck on by a preparation taken from Dr. Chase's Receipt Book. I find it pays to advertise in that way, and to cultivate the home market. There is not half the honey used in country towns that could be sold if properly put on the market. The grocery stores should be supplied at all times with that which is known to be pure; and if the producer is known in the community, there will hardly ever be any question about that. EUGENE SECOR.

Forest City, Iowa, Oct. 31, 1881.

We reproduce the receipt for making labels stick to tin:—

LABELING ON TIN.—The difficulty in making labels stick to tin arises from the extreme smoothness of the surface. To overcome this inconvenience, roughen the surface with sandpaper before putting on the label. This is a quick process on the tops of tin boxes; but for labeling upon the sides of boxes or cans, the quickest way is to have the label made long enough to go more than around, the extra part being blank, or without printing, to allow the other end to lap over it, and all is right, even with common paste.

2. Wetting the tin with common whitewash, and wiping it off after it is dry, roughens the tin about equal to sandpapering, as the lime corrodes the surface somewhat.

GIVING NEIGHBORS A START, ETC.

I wish you would tell us whether you consider it wise or otherwise for a bee-keeper to give his neighbors, who are also bee-keepers, any information or assistance about the management of their bees. If, for example, he sells them smokers, foundation, or bee-books, do you think that by so doing he is likely to injure his future prospects for marketing his own honey? J. W. HARKNESS.

Keeseville, Essex Co., N. Y., Oct. 15, 1881.

By all means, friend H., give your neighbors all the assistance in your power, in the way of information, advice, etc., both in bees and all else you may be both engaged in. Of course, where your time is limited and valuable, you are not expected to throw away time more than money; but so far as injuring your own chance of a good market by helping others is concerned, I think such is rarely, if ever, the case in the long run. The man who is always willing to help those around him is the one whom God prospers. To be sure, we have seen men who spent time visiting round at the neighbors, when their presence was sorely needed at home; but I am sure one should always be willing to give freely all the information he can, that will be of advantage to those around him, consistent with a proper attention at all times to his own affairs. Do not the friends agree with me?

SUCCESSFUL WINTERING, ETC.

I was much interested in W. L. Coggeshall's report of a crop of honey of over 180 lbs. per hive. I think every bee-keeper would be obliged to you if you would get his management of bees in detail, and publish the same. My report for last year is as follows: Last fall I had 140 colonies—134 in Simplicities, and 6 in chaff hives; about 12 were made by uniting nucleus hives used for queen-raising, and were rather weak. I wintered the chaff hives on summer stands, and 134 colonies in cellar. My cellar is rather damp, but has ventilation by 6-in. stovepipe entering chimney, and one small window filled with a bundle of straw, and left open. My hives had no top ventilation, but were covered with enameled cloth and 1½-inch chaff cushion, and cover as usual; but were raised on one end by placing ⅜-inch blocks under two corners of each hive. In spring I found one hive dead in cellar, and one colony dead in chaff hives. The 5 living colonies in chaff hives were every one as strong as the strongest in cellar. Of the 133 living colonies from cellar, I gave 62 to a neighbor on shares; 4 colonies I divided in nucleus hives for queen-raising, and 7 I united with other weak or queenless colonies, leaving me 65 fair colonies for honey-gathering. I increased these 65 colonies to 130 (besides about 30 nucleus hives for queen raising), and shipped, or have ready for shipment, 7082 full one-pound sections (about 7000 lbs. of comb honey), besides what we used in house or sold in local market, and about 1200 lbs. of extracted honey (probably more). My extracted honey is taken from frames in the upper story (I give only 6 wide frames with sections, and one brood frame to each upper story), and the sections only partly filled. My bees are not black bees, hybridized by using Italian drones, but pure Italian, or as pure as they can be kept in an apiary surrounded on all sides by black bees only, and furnishing the only Italian drones within 15 or 20 miles, to hybridize those black bees. CHAS. H. GROTE.

Mauston, Juneau Co., Wis., Oct. 10, 1881.

POLLEN AND DYSENTERY.

I have read with much interest the various articles in GLEANINGS in regard to wintering bees, and after an experience of fifteen years with its ups and downs, I am compelled to take sides with Mr. Heddon. Some years ago I put up a quantity of liquid honey in glass jars for my own use; and, wishing to have it extra nice, I drained out nice box honey (not a particle of *visible* pollen in it), heated it in a water bath, when a thick scum arose to the surface, smelling and tasting strongly of pollen. I thought then, and believe now, that all honey contains some pollen; but owing to some unaccountable freak of nature, the amount is variable in different years; and when in excess the bees have the dysentery. It is no use to remove the solid pollen and then leave the bees to eat honey strongly tinctured with it. I believe it possible to tell beforehand whether bees will have the dysentery, by examining samples of their honey. This honey could have the pollen removed by scalding, and then be returned, or sugar could be given in its place as thought best.

Who has ever tried the experiment of keeping bees the *entire winter* on sugar syrup, with all the pollen removed from the hive? I do not now recollect of ever reading of such a case. I have had better luck in wintering than the average, having never lost more than half of my swarms, and I always winter in a cellar containing a stove and thermometer, with facilities for ventilation. I leave the upper stories out of doors, and pile the hives 3 or 4 deep, each of course on a bottom-board, close the front entrance, and leave an opening in the honey-board about ⅜x11 inches, and keep the temperature from 35 to 45°. F. N. BLACKMAN.

Tomah, Wis., Nov. 3, 1881.

You are right, friend B., in saying that all honey does contain more or less pollen, as you will see by looking back at Vol. 3, p. 121. You will also see, in the record of my first experiments with sugar feeding, that I wintered successfully colonies entirely on sugar, and made quite a stir about their not spotting the snow at all in the spring.

WINTERING TWO COLONIES IN ONE CHAFF HIVE, ETC.

As the honey season is now over, and bees prepared for winter, I suppose I may hand in my report. I went into winter last year with 12 swarms; 9 in chaff hives, 4 of which were in the upper stories, 2 in Simplicities, and one in an L. hive not protected. Those in the chaff hives wintered well, both in the upper and lower stories. But as moving them twice is attended with considerable trouble and the loss of some bees, I shall try to have a chaff hive for each swarm hereafter. Those in Simplicity hives came through, but lost more bees. The one without protection died, leaving me 11 to commence the season. I have increased to 24, and taken 900 lbs. of honey, mostly extracted, which sells readily at home for 16⅔c., which is better than to ship it, I think. I sell direct to consumers. The surplus was nearly all gathered during September, after the rains came. They got but little more than enough to keep up brood-rearing during the fore part of the season, but there was not a day till honey ceased this fall that robbers troubled at all. On the whole, it has been a very good year. C. B. THWING.

Hamilton, Mo., Oct. 11, 1881.

CAGED QUEENS DROPPING EGGS.

I have noticed, in several instances, when queens were caged in hives, that, after removing all the cells 4 or 5 days old, they would start other cells, and have eggs in them, and would repeat their efforts as often as thwarted, for weeks, and, in one instance, for nearly a month, and not an egg could be found in any cell in all that time. Now, where do you think they got the eggs? I believe the queen drops them, and the bees get them through the bottom of the wire cage. If that is the case, it would be well to always have a piece of paper or pasteboard in the bottom of the cage, to catch the eggs. As I discovered no signs of laying workers, I can see no other way that they could have obtained the eggs.

Oxford, O., Oct., 1881. D. A. MCCORD.

Had you tested these cells to see if they would surely raise a queen, friend M., your experiment would have been more conclusive. I have often found eggs in queen-cells, without being able to decide where they came from, and sometimes they would produce a good queen too; but I do not now recollect whether they had a caged queen over the frames or not. Can anybody else give us light on this matter?

GRAPE SUGAR CANDY NOT SO DEADLY, AFTER ALL.

Last fall I had a 6x3-frame nuclei that were queenless about Sept. 30th, and I united them with three that had queens, taking out all the frames that had either honey or brood in them, and gave each hive two frames filled with brood, except what honey was in them, and 3 or 4 frames of empty comb, putting a chaff division-board on each side; then I made two batches of candy according to your directions for 5-cent candy on page 385, Oct. No., 1879; put it in two trays, and laid them on top of frames, expecting to see it all put into the combs in a few days (they were well covered with old carpet). When I went to look at them I found considerable brood in the empty combs, but none of the candy stored away. They had used just what they wanted for present use, so I tucked the carpet down tight and left them, and I believe they lost fewer bees through the winter than any other hives in my yard, and had some of the candy left April 1st. C. T. SMITH.

O'Fallon, St. Clair Co., Ill., Oct. 24, 1881.

AN A B C SCHOLAR IN TROUBLE.

This is my first year in managing bees in sash hives. I have used box hives for 30 years. My bees all appeared in good condition 3 weeks ago, but the last 3 weeks have been, part of the time, quite cool, and it rained 9 days out of 10. I overhauled part of the bees to-day, and found several without brood or eggs, and none with very much brood.

Now, I want to learn from you whether bees are in the habit of letting brood entirely run out under such circumstances, or have the queens gone by the dozen all at once? I tried to hunt out the queens (if there were any), but the weather is quite cool, and most of the bees are at home, and clustered so closely and so densely that I could get no satisfaction. You will do me a great favor if you will give me your opinion on the condition of my bees, by first mail; and if they are queenless, could queens be shipped and introduced safely after this time of year? W. H. STEWART.

Orion, Richland Co., Wis., Oct. 5, 1881.

No, sir, friend S., your queens have not gone by the dozen at all. Just let them be, and don't bother them. There are certainly queens there, or you would not find so many bees; but they have now stopped laying, just as honest queens should this time of the year, and they are so small and slender, and quick withal, that it is little wonder you could not find them. They are all right, and better off without any brood until toward spring. I am not sure but they would be better off without any until April. We can ship you queens almost any month in the year, but I am pretty sure *you* do not need any.

HONEY FROM THE OAK.

At this season of the year the bees gather honey largely from the oak-apples, or nut-galls, growing on the live-oak. Before our late rains, the honey had exuded from and candied on the surface of these balls, so that two or three grains, by weight, could be gathered from a single ball. It stood in round drops as of dew or perspiration, arranged in a circle around the ball, about a third of the distance from point to stem. The ball itself very much resembles a small peach. I. L. VAN ZANDT.

Dido, Tex., Oct. 20, 1881.

Many thanks, friend V., for the valuable facts furnished. Now the question is, Can we grow this oak, with a tolerable degree of certainty of having it bear this honey? This is the second case, if I am correct, where we have heard of a plant that produces candied honey. Will some of the friends please send us by mail a small twig of this oak, having, if possible, one of these oak-balls on it, and we will have an engraving made? Honey from the oak is reported from a great many different localities, and we wish to see just what kind of oak it is. If I am right, it is only where certain insects puncture the twigs that these oak-apples are found, so the honey is not a normal product of the tree. Now the question is, If we can get the oak, will we have the insect as a matter of course? and have we already the kind of oak that bears the honey?

POISONED BEES.

I am troubled about some disease that is killing my little pets, my Italian bees. The worker bees in all my full-blood Italians are dying by the hundreds. The ground is strewn with them night and day. They crawl out of the hive, and seem to lose the use of their legs; squirm around, fall on their back, and seem to die in great pain. They seem to be full of honey, with plenty of sealed honey in their hives. It does not seem to affect any but the Italian workers. The young bees and hybrids are not affected at all. What is the matter with them, and what can I do for them? JOHN P. INGRAM.

Bonham, Fannin Co., Tex., Oct. 20, 1881.

The symptoms are somewhat like poison, friend I. Are you sure they have not been in mischief somewhere, and got poisoned? It looks a little like the Krock and Klasen trouble. It may be they have gathered poisonous stores from some source. See what is said in A B C of poisonous honey. In any case, I should remove their stores and feed them on syrup of pure granulated sugar; and if the bad symptoms then cease, you will be sure it was from the stores they gathered. The reason why it affects the Italians and no others, is probably because they, in their extra industry, have found something the others have not.

BEES ON SHARES, ETC.

I have not taken GLEANINGS the past year, as I have been away this season, and let a friend have my bees to work on shares for half the honey and half the increase. I got for my share 598 lbs. comb honey, 149 lbs. extracted, and 11½ swarms as increase. I had 28 swarms that I let him have in the spring—all I saved out of 85 swarms last winter. I was at home 2 weeks the last of June, and purchased one swarm of a man in the country. It was put into an empty hive the 20th of June. I took 3 cards of brood from it with bees enough to cover, and gave them some frames filled with combs in their place, also filling the hive. I put the brood in with frames filled with empty combs. They raised a queen, and built themselves up to a good swarm. I have enough to winter on. From the main hive I have taken 125 lbs. comb honey in 1¼-lb. sections. Is not that an extra good yield for a queen? I shall work my own bees the next year, the Lord permitting. I have 42 swarms now, all in good shape for winter-quarters. I shall winter most of them in my cellar, and pack the rest. My loss last winter was in those that were packed out of doors.

T. D. WARD.

Lawton, Vanburen Co., Mich., Oct. 28, 1881.

HOW THEY DO IN CALIFORNIA.

In the beginning of February, bees were bringing pollen in quite freely; the previous fall stores being almost intact, we proceeded to bruise the cappings of one comb in each hive with the flat of honey-knife. This we continued to do at intervals, according to the condition of each colony, and pretty soon had rousing swarms, their number being 73. Early in March we obtained a fine number of artificially raised queens, and at once provided each with a two-frame nucleus, intending, in the event of any swarms issuing, to give the parent hive a laying queen with two or three combs of brood and bees, to make room for which we intended to remove a like number in favor of the swarm which had issued, thus giving a fair start to all around, placing the new swarm on the stand previously occupied by the nucleus, so that the bees in the field might not be lost. So far as we can judge from the few swarms obtained (13 in number), we found it to work all right—scarcely a bee being lost in the operation. April 2d our first swarm came out; on May 7th, our last. Finding swarming going on slowly by reason of cool cloudy weather during the first half of April, we proceeded to build up our nuclei, and so prepare for any honey which might come with brighter weather. May 17th we began to extract, continuing to do so at intervals till near the end of July, when we shut down for the season, having obtained about 8500 lbs.

Our yield of honey might have been greater but for the fact that we had super comb for about a dozen only, with 30 lbs. thick fdn., necessitating a heavy building of comb with the first flow of honey. Our increase for the season is 60, there being, at this writing, 133 well-stored hives in our apiary.

D. STOCKS.

Springville, Ventura Co., Cal., Oct. 7, 1881.

TEXAS; ITS HONEY RESOURCES, BEE-CAVES, ETC., AND — TOBACCO.

I do not live a thousand miles from your "Texan" correspondent, who is the enviable (?) owner of those nine young Texans in which you seem so much interested (Sept. GLEANINGS, pages 442 and 443), and I am very sure it would do you good to carry out your desire; at least, you would see the loveliest bee country (natural) you ever saw. I do not wonder at his wanting to secure a large yield of honey, when he can get from 15c to 25c per lb. for it. Where I live, only about 100 miles west of Richland Springs, is a very different natural honey-producing country, being high, rolling, and bare, so far as timber is concerned; very dry, and no farming done except by irrigation.

I have lost one stand of bees already, and the others are destitute of stores. I have not taken a pound of honey this season, and am in a query whether it will pay to feed my bees or not. I do not now believe they will ever be any profit on this creek, except at the head, where there is more timber and brush, nearly all of which bears honey at some time of the year. The live-oak tree has an abundance of honey on it now—little balls on the tree, with great drops of honey on them. Bees get very rich off them when they can reach them. I do not know whether I am a "Blasted Hoper" or not. You shall decide.

I see an article copied from *The Youth's Companion*, on "Bee-Caves in Texas." I think the picture a little overdrawn, and in my next I will tell you, not of *that* cave, for I never heard of it before, but what I know and have seen of "Bee-caves in Texas."

I will say here, that although I have been an excessive and successful tobacco-user for 8 years, up to the 23d of September, 1881, when I was converted, so far as the weed is concerned I am now a *clean man.* R. W. LANDRUM.

Dave Creek, Texas, Oct. 15, 1881.

May the kind Father bless and strengthen you, my friend, in the work indicated in your closing paragraph. If all men, when converted, were converted clean, very likely the world would take more stock in the religion of the Lord Jesus Christ.—We are glad of what you say about honey from the oak, because there seems to be something of a mystery surrounding the phenomenon.

THE WAX QUESTION; SOME OF THE A B C CLASS NOT SATISFIED.

In October GLEANINGS, 1881, page 495, I see "some questions" by a young hand. Now, in my ignorance I want to ask you if your answers to the first and second questions are not incorrect. I know you agree exactly with all the best authorities in the world, but I want to ask a question, also. If your answers are correct, why is it that, in my section of North Carolina, they can not make it after July 1st? It can not be for the reason given by many, that *only young bees produce it*, for in my section, 7 years out of 10 they raise young bees every month of the year. We seldom have swarms here in July, but I have had, sometimes, very large ones, and they never make *more* than 2 to 4 pieces as large as a man's hand. Why is this so? I know they make a little all times of the year, but not enough to store up a support for the colony. And why is it that they never cap over those cells of comb filled with honey in October, the comb being made the spring before? In April, May, and June, a large swarm will fill a story of the Simplicity hive in from 9 to 15 days, and it will take the same swarm the remainder of the year to fill one frame of said hive. My own opinion is, that they gather it from around the buds and stems of young leaves of trees. We always see them very busy around them, gathering a peculiar gum that exudes from them, particularly the peach, black gum, sweet gum, and white oak. After the leaves get fully grown and hard, there is but very little of said gum. We seldom see the bees at work on them, and they make little or no comb. I think it is propolis that he gathers from his body, as he gets propolis at all times of the year, and comb he certainly does not. **ROMEO.**

Triangle, Lincoln Co., N. C., Oct., 1881.

I am glad to know you are looking into the matter, friend R., but I fear you are very far out of the way. The fact that we can at any time, when the weather is warm, produce comb to any extent by sugar feeding, covers pretty much the whole ground. The reason why your bees do not build comb rapidly in October must be on account of the coolness of the weather. We have comb honey made at any season of the year when honey enough is coming, and so they must build the comb in which to store it. A great many of our friends get foundation built out by feeding in the fall, when no honey is being gathered. If you watch the bees, you can see them take off the wax scales and build the comb, yourself; and then you will be fully satisfied it is not propolis.

LAYING WORKERS IN THE SAME HIVE WITH A LAYING QUEEN.

While examining a nucleus in July last, I found a laying worker in the act of laying, and watched her deposit several eggs in worker cells. I then caged her and proceeded to examine the other combs, and found a fine large queen attending to her own duties. I released the worker on the same comb, and caused them to meet several times, and they took no more notice of each other than if they had both been workers. I called Mr. Langstroth's attention to the fact, and he said it was something new to him, that a queen and a worker would live together in harmony in the same hive. The queen had been laying for some time. I call them laying workers, because they have never been fertilized, and therefore they are not fertile, but simply laying workers, as their progeny are all drones. What do you say?

Oxford, O., Oct. 18, 1881. **D. A. MCCORD.**

Friend M., you remind me that Neighbor H. has been telling several times this season, that the Holy-Land queens will tolerate a fertile worker, for he has once or twice found eggs in the cells after a young queen had been hatched. As a proof, the eggs hatched the usual diminutive drones. Now, in view of this, have you not got a Holy-Land queen in that hive, or at least Holy-Land blood? If so, no wonder both you and our sharp old friend Langstroth were puzzled. By the way, friend M., I will tell you how it seems to me you may do a great service to our people. When Mr. L. is able to talk bees, but not to write, suppose you have some of these talks with him on different subjects, and afterward write them out. I will pay him, and you too, for the service. It will be next best thing to having articles from his own pen; and with your practical experience with bees, you may both help each other greatly. Friend L. is a great talker, and it has often seemed to me that many of his talks are too good to be lost.—Since you mention it, it does seem as if the term *laying workers* were the proper one. Shall we not at once set about an attempt at a reform, in this matter of names?

SOME QUESTIONS BY A "YOUNG HAND" ANSWERED BY ANOTHER "YOUNG HAND."

Now, I protest, friend R., against the idea that bees ever get lazy. How do they gather the honey-comb? By suction. Where do they get it? From any thing that has honey in it. What time of year do they gather? At any time they can gather honey. How do they gather and deposit their honey? By sucking it up out of the blossoms into their honey-sack, and when they get a load they deposit it in the cell by placing a particle of honey at the bottom of the cell, and brushing or licking it in all over the bottom of the cell, and the next load he licks the sides of the cell so that the air is all excluded. How do they seal their honey-caps? With wax, and their tongues and mandibles. Do bees get lazy? No. What causes bees to get lazy? Nothing. Do bees ever have any disease? Yes. What remedy is the best? Clean house, pure honey, and plenty of bees in each hive. How far will bees go after honey? I think they go seven miles. What do bees do with water? It is used as drink, and to thin thick honey.

You and Mr. Quinby and Huber write as if you thought wax grew. Mr. Quinby says it is very much like asking where the cow gets her milk, or the ox his tallow. I have seen them making it by day and by night. **CHARLES R. BALLOU.**

Halfmoon Bay, San Mateo Co., Cal., Oct. 20, 1881.

"EXTRA PURE" QUEENS.

In the spring of 1880 I bought a tested Italian queen from W. P. Henderson, Murfreesboro, Tenn., and introduced her successfully into a strong colony of bees. In two weeks this colony swarmed naturally, and with the extra queen-cells I succeeded in raising a queen for each colony of my little apiary of 12 colonies. All of said queens were beauties, and although there were no drones in the neighborhood, as far as I know, except hybrids and blacks, every one seemed to be purely fertilized. In fact, I could tell no difference between theirs and the worker progeny of the old queen. This spring I concluded, as my queens were all so pure and good, to let each colony that swarmed raise its own queen. I had but six swarms, and all the new queens looked nice, and I thought, as there were so many fine drones flying, they would all be purely mated; but imagine my surprise when the workers of all of them except one turned out to be hybrids! The above facts incline me to believe in the theory of the "extra pure" queens spoken of by friends Hutchinson and Doolittle. W. L. FRENCH.

Martinsburg, Mo., Oct. 15, 1881.

BEE-STINGS AND RHEUMATISM, AGAIN.

As there has been considerable said in GLEANINGS in regard to bee-stings for rheumatism, I thought I would tell you of a case I met a short time since. About a month since, a neighbor, living about 6 miles in the country, called on me to go out and examine a colony of blacks that he thought the moth were troubling. While there the lady told me that bee-stings had cured her of rheumatism. She said that she had for a long time been so troubled with it in her thigh and hip that it was difficult for her to walk across the house. Last summer she and her sister undertook to transfer a swarm of bees from an old gum, and not being acquainted with that kind of business, never having seen the operation performed, they got terribly stung before they got through. She was so badly stung that it made her quite sick; but since that time she has not been bothered with rheumatism. By the way, they lost their swarm of bees; also the one that I went to examine was entirely eaten out by the moth.

J. K. SNYDER.

Tiffin, Johnson Co., Iowa, Nov. 7, 1881.

INTRODUCING; A PLAN BY WHICH YOU NEED NOT HUNT FOR THE OLD QUEEN.

The imported queen you sent me in July arrived in splendid condition; only one of the bees accompanying her was dead. I introduced her safely into a swarm of blacks, and now have a fine swarm of Italians. My way of introducing was to take two swarms of bees, nearly ready to swarm. Opened No. 1; took five frames, heaviest with brood; brushed all the bees from them; put frames of brood into an empty hive, with queen caged on one of the combs; removed swarm No. 2 a rod or so from its old stand, when the bees were flying briskly; put the cage containing queen and brood in the place from whence I removed No. 2; thereafter I followed directions as on the cage. The way I have described, saves hunting for a queen. I have 29 black swarms, one Italian. The honey season has been very poor.

JAS. W. HOOPER.

Wolfboro, New Hampshire, Nov. 8, 1881.

A GOOD REPORT FROM THE RUBBER PLATES FINALLY.

Our bee season is now over, and I will arise and report. Last spring, J. E. Walcher and I joined our forces, and when we get our bees together we have 117 in pretty good condition. He wintered in cellar, and got all through, and I wintered on summer stands with surplus tops on, and some with just a thin cloth over them. I lost nearly 25 per cent; but what survived did well—I think fully as well as W.'s did, although he did not use so much honey. We increased this summer to 160 colonies, and have extracted nearly 5000 lbs. of honey, mostly from white clover. Owing to the drought we got but very little fall honey; still, they are in good wintering condition.

The $15.00 rubber plates we got of you worked like a charm after we got the hang of it. The sheets were too thick for most persons; but we did not complain, as we had plenty of wax, and the bees would extend it to nearly two-thirds of the full length of cells. I suppose you will have the same kind, or something better, in the spring. I am much in favor of having the foundation fresh when you want to use it.

We have had several very poor honey seasons here; but we find failures in almost every line of business, and we hope to have a change here for the better next season. I have not given up my theory of going to the honey when it will not come to me.

Hillsboro, Ill., Nov. 8, 1881. I. H. SHIMES.

We have already improved the rubber-plate machines, friend S., and can now make sheets full size, 5 square feet to the pound, without trouble. We will furnish complete outfits, with printed instructions, for $15.00; if they don't please they can be returned, purchaser paying expenses both ways.

FRIEND GOOD'S REPORT FOR 1881.

Spring opened late and found my bees in a deplorable condition—my nearly two hundred colonies being reduced down to 15 or 18 fair colonies, and 38 or 40 nuclei. After buying a few colonies I started in the spring with 20 colonies and 40 nuclei. As I made queen-rearing a specialty, I did not get as much honey as might have been obtained if honey alone had been the object.

I raised and sold 437 queens, nearly all dollar ones, and have sold 28 lbs. of bees; 6 nuclei, 2 and 3 frame; 5 full colonies; have taken comb honey, 1150 lbs.; extracted, 124 lbs.; part of the honey sold at 18c.; have now 147 colonies of bees in good condition for winter. When my honey is all sold I shall have just about $700.00 for what I have sold out of my apiary. How many of you have done better with the same amount of bees?

I wish to thank the many kind friends who have sent me their orders for queens. If there is one among you who is not satisfied, let me know, and I will try to satisfy you. I tell you, it does me good to receive such kind letters as many of you bee-keepers write. I. R. GOOD.

Nappanee, Ind., Nov. 9, 1881.

OUT OF PRINT (?)

Some three or four weeks ago I ordered a paper-bound A B C from our news-dealer. He sent to the American News Company, New York city, but they say that the book is out of print, and it can not be obtained. Is that so? If so, why do you advertise it?

S. VINCENT.

Bethel, Fairfield Co., Conn., Nov. 8, 1881.

I fear the American News Co. are allowing some lazy clerk to injure their business by such statements. The A B C is not out of print, nor can it well be so long as the whole book, every word and letter of it, is standing in type. Neither can it well be out of date, for the types that form it are being constantly changed, to note every real improvement in bee culture made in this or any other land. Any order can be promptly filled by return mail, express, or freight, to the American News or any other individual or company; and if orders ever crowd, our big cylinder press is ready to run on them all night as well as all day.

Though I may not be so well informed as many of your subscribers, I hope you will allow me to say a few words; yet I feel a delicacy in so doing, for in your columns it seems that *Mitchell* (N. C.) is only another name for "Humbugs and Swindles."

THREE-BANDED HYBRIDS.

One of your contributors speaks of queens whose royal progeny produced *all* three-banded workers, and yet were *known* to have mated with black drones. How was it known? I am led by custom to judge of bees by their bands, but I think the form of a worker bee is worth equally as much as her color, and gives an almost infallible index both of the quality of her Italian blood and of her honey-gathering abilities.

LEAVING SECTIONS ON ALL WINTER IN THE SOUTH.

The question of leaving sections on all winter is of considerable moment in the South—they must of necessity be *left* somewhere. The time is so long between the period at which they should be removed from the hive and the coming of winter that it is almost impossible to protect them from the moth. I would add, for the benefit of your New York correspondent, that the moth will live on new comb, and even come to maturity in the bottom of the hive without being on the comb at all.

BEES WITH SHRIVELED WINGS—CAUSE.

Some time since, one of your correspondents received a colony of bees and complained that the young hatched shortly afterward had immature wings, which you attributed to improper ventilation. It was *improper* ventilation, but not such as a colony would generally receive in transportation; it was too much ventilation. When the larva of an insect enters the chrysalid state, the slightest reduction of temperature at the critical moment of its transformation is almost sure to prevent the perfection of the insect, or cause the death of the chrysalis.

CHAS. R. MITCHELL.

Hawkinsville, Ga , Oct. 27, 1881.

Friend M., most of us know the difference between Chas. R. and "N. C." Mitchell, so be not troubled.—The great objection I should have to leaving sections on all winter is, that the boxes would be any thing but nice when filled with honey again.—Doubtless you are right about the cause of wingless bees; since you mention it, I recall cases where brood left some time out of the hive produced wingless bees. Thanks for suggestion.

BEES IN MASSACHUSETTS.

The past season we think has been a very poor one for honey about here. The middle of August I could not show a pound of sealed honey in any or all of my brood-chambers, and had it not been for goldenrod and wild asters this fall, my bees must have all perished before New Years. I think they have stores enough now to pull through passably. There are but few bees kept in this region. Whether it is because the honey-secreting flora does not compare well with other parts of the country or not, I am unable to say. However, of late there is beginning to be more interest shown in progressive bee-keeping, and our county fair has this year, for the first time, offered a premium for the best exhibit of bees, hives, and implements. Whether this was in part due to the "exhibits" and "statements" published in the "Transactions" of Mr. Alley and myself last year, I have no means of knowing.

BEWARE OF ANTS IN SHIPPING QUEENS.

Do ants kill bees and queens in transit through the mails? One of my neighbors, Mr. Charles W. Dow, sent 15 miles for a queen. When it arrived in due time by mail, it was overrun with emmets, and queen and bees were all dead. Honey on a sponge was the food provided in the cage. He next sent 100 miles in another direction, with the same result. He then sent for one by express, and it came all right. He thinks the emmets attacked the bees in the Lynn postoffice.

BEES IN A CHIMNEY; GOOD VENTILATION.

A swarm of bees took possession of one of my neighbor's chimneys a year ago last summer. I visited them the following November. The chimney contained two flues, each about 8 inches square, without any arch or covering whatever. The bees occupied but one of the flues—the one which led into the spare chamber, and their combs extended to within six inches of the top, when they came in and out. I covered this flue with a board, stood upon four bricks, and advised their owner to let them remain till spring, when they would probably be all dead, and the chimney could then be cleared. But they lived, in spite of *too much upward ventilation*, and snow, which must many times have covered their combs, and, melting, supplied them with *plenty of water in winter for breeding*. And now, like Banquo's ghost, they refuse to be laid, and afford another argument in favor of deep combs, thick side-walls, and upward ventilation.

Now, Mr. Editor, you won't hurt my feelings any if you don't publish this "hash." I shall take GLEANINGS just the same, and think it the best bee paper I have seen yet. **PHIL. R. RUSSELL, JR.**

Lynn, Essex Co., Mass., Nov. 9, 1881.

We have had some quite serious troubles with ants in the mail, in some of the extreme Southern States, but none have been reported before from the North, as far as I know. There is a very simple and easy way of cutting off ants, and it is to inclose the whole cage in wire strainer cloth, so fine that no sort of an ant can get through it. Last summer our boys lost three imported queens by leaving them caged a few hours before introducing, in an empty hive sitting right on the ground. Please keep this in mind, all of you, that caged queens will be killed by ants in a very short time, if they get at the cages.—I hardly think, friend R., that it was the deep combs alone that saved the bees in the chimney. It is true, such a covering of combs above them would do much to keep off the cold, and as they had their combs built in all solid, and nicely waxed up, with a sure ventilation right through, I am not surprised that they wintered. It would be a little difficult to manipulate bees in a hive only 8 inches square, unless we worked them as your neighbor Alley does the Bay State hive.—Many thanks for your expression of good will, friend R., even though we should reject your articles.

BUILDING UP A BUSINESS AND A REPUTATION.

I am one of your A B C class of 1880. I commenced with 4 box hives, and I have now 34 full colonies and 12 three-frame nuclei. I have a queen from a pure Italian mother, in all full colonies, and about ¾ are purely mated. I have raised about 50 nice queens this season. I am Italianizing all of my neighbors' bees. I have them nearly all done now, so next season there will not be a black queen within over two miles of me. Now, if I were to buy one of your best selected imported queens, and rear some good queens from her next season, will you buy some of me? I would like to keep about 25 or 30 nuclei going next season. My colonies are very strong. I wish I could sell 20 lbs. of bees by the pound.
A. H. SQUIER.

Nicholville, St. Lawrence Co., N. Y., Aug. 8, '81.

I dare not promise to take queens next season, so long ahead, but I have this year purchased nearly all that were offered for sale by reliable parties. You will have to build up a reputation, as all the rest do, friend S.; and the way in which it is done, you can see by the reports in almost any number of GLEANINGS. Strive hard to please all your customers, and they will not be slow in letting others know that they are pleased. You may, any of you, at almost any time send me a few queens as samples of what you can furnish, and I will allow you the regular price for them I am paying at the time. If, after they are introduced, I find too many of them turning out hybrids, I shall not be slow in telling you of it. You will probably find a demand in your own neighborhood for all the queens, bees, and honey, you can raise for some time. Of one thing rest assured: we shall pretty quickly find out just what kind of a person you are, and there is just now an immense call for straight, square, faithful men.

I see by last GLEANINGS that you hold yourself responsible for those who advertise with you. I want to state a case to you, and have your opinion on it.

Last September I saw an advertisement of H. Alley, Wenham, Mass., in GLEANINGS, Cyprian queens for $1.50. I gave a neighbor $1.50 to send for one; he sent; received a dead queen; returned it, and could get no satisfaction till last month. Alley said he would "book" him for one queen. Now, we intended to raise queens from her had we received her in time, but we received her only yesterday, the 9th, nearly a year after sending the money. We have lost the use of her this season, which is quite an item. I wrote Mr. Alley that I would be satisfied if he would send me two Italian queens, and have received no reply. My experience and his flattering ad. in last GLEANINGS do not harmonize. I find a most marvelous contrast between his actions and the treatment I received from W. W. Cary, of Colerain. The latter I find will do more than you expect of him: the former will "hardly" act honest. I do hope bee-men will gain a good reputation for honesty. Do you think I expect too much when I think Alley ought to send another queen to make up a little loss?
C. NEADS.

Lindsay, Ont., Can., Aug. 10, 1881.

If I am correct, friend N., you got a queen right back. She came dead, unfortunately, but this is nothing very unusual. Of course, Alley should not have kept you waiting a year; but still, the case is far different from a deliberate and prepared fraud. You have both been unfortunate; but can you really claim any thing more than the loss of the use of the money? I know, expecting a queen all the time is an annoyance; but by the expenditure of another $1.50 you could have had one promptly from some one else, could you not? Friend N., I wish to be a friend to both you and Mr. Alley, and I wish, too, you two to be friends. It may be said the above is pretty hard on our friend Alley; but last month I allowed a very strong letter in his praise to go in print. See page 540, Nov. No. Friend Alley has a good many warm friends, as well as a good many who complain much of his want of promptness. He has lately written us to send in all complaints, and he would fix all satisfactorily, and I think he is doing so.

FIREWEED.

The fireweed comes up itself here wherever there has been an old chopping in the forest where fire has got in and burnt the brush and tree-tops up; hence the name, fireweed. It comes up in the latter part of May or first of June; has a leaf resembling a species of lettuce I have seen that came from St. John's, Canada; the leaf is 4 or 5 inches in length, and perhaps one inch wide. The stalk grows very rapidly, and blossoms in about 4 weeks after it comes up. The stalk is all the way from 2 to 6 feet in height, and branches out about midway of the stalk into several branches, each branch having more branches on it, and at the end of each branch is a blossom resembling a long bud, the bud-like blossom being from ½ to ¾ of an inch in length, and remains in blossom until the latter part of September; and while some buds are in blossom, the seeds will be flying from others through the air like so many bees, only white, resembling somewhat the cotton that grows in the Southern States, only not so large. I must say that it is as good a honey-plant as I ever saw. The bees are working very thick on the blossoms during the three months they are in bloom. The honey is nice and pleasant to the taste, as almost any other kind. I have never seen any of the plants growing on sandy soil, although it may grow there for all I know. Had I known before that any one of my brother bee-keepers would wish for some of the seeds, I should have gathered some. However, any one wishing the seeds, to give fireweed a trial, can get some from me any time after the 15th July, 1882, for ten cents per ounce. This will sow ¼ of an acre.
G. PHILLIPS.

Romeo, Marthon Co., Wis., Oct. 29, 1881.

MY BEE AND HONEY REPORT FOR 1881.

After uniting a few weak colonies I had 136. Sold 61 first-class colonies and 2 nuclei; had 73 colonies to begin the season with; worked 27 colonies for extracted honey; have taken an average of 211 lbs. per colony. Put boxes on 20 young colonies; have an average of 40 lbs. each of comb honey. Run the rest of them for increase; have this fall 147 colonies. Our bees had 18 acres of alsike clover, new seeding, and 4 acres of second crop to work on. They gathered most of the hodey from the alsike clover. Basswood did not yield much honey this year here.
C. M. WOOLVER.

Hallsville, Mont. Co., N. Y., Nov. 6, 1881.

ARE FOREIGNERS MORE INTEMPERATE THAN AMERICANS?

In Aug. GLEANINGS, page 405, you say, "Although a foreigner by birth, he was free from all these vices." Do you wish to be understood as saying that profanity and intemperance are the rule, not the exception, among foreigners, or was that a "slip of the pen"? My father was a Scotchman, and so was my mother (they are both dead now), and I was born in Scotland, which makes me a foreigner, does it not? Now, sir, don't you think that, out of a given number of my countrymen, I can find more who neither chew tobacco, drink rum, nor swear, than you can out of the same number of Americans? I can find more who attend church, and Sunday is better observed by the Scotch than any other nation on the earth unless it is the (out of respect to your feeling) American.

DELAYS IN THE QUEEN BUSINESS.

And while I am about it, I would say that a man who takes my money for a queen, and keeps me running to the postoffice two or three times a week after it, is little short of a highway robber. I sent my money to a dealer who advertises in one of the bee papers, and for 4 weeks regularly he wrote me that he would ship the queen on a given day; but instead of the queen I would get a postal card reading something like this: "Sorry to say that I could not get queens to fill your order to-day, but will have one for you next week." The queen cost me a dollar, and I spent at least three half-days of valuable time getting it, which was worth a plump $3.00 more, saying nothing of the colony being queenless for so long a time. Now, all this could have been avoided by writing in his advertisement, that no queens would be ready to send out before the 1st of July. To be sure, he would not have got my dollar, but he would be nearer heaven than he is now. Do you suppose I would order another queen of that man? "Not much." The man who fills my order "on the spot," no matter what it is, is the man for me every time. WM. CAIRNS.

Rockland, Sull. Co., N. Y., Aug. 8, 1881.

I did not mean to make any insinuations against our friends of foreign birth, friend C., and I presume I should not have used the expression I did. Very likely, you are right. Will you forgive me?—In regard to delays on queens: It is a great and most trying evil. I have published a good deal on the matter, but unless it is cured we must keep the matter stirred up. I do not know but that we shall have to let the names of the slow ones come out in print, for we have quite a number of queen-rearers who have always been so prompt, *after they have put out an advertisement*, that no one has ever complained of them.

BEES ABSCONDING WITHOUT A QUEEN.

A friend of mine is very much puzzled over a caper that some bees which he recently divided have cut up. He divided a colony containing twelve frames of brood and honey, and strong in bees. He took six frames, together with the queen, and young bees, and put them into a new hive, leaving the old hive on the old stand, without queen. There was plenty of young brood, even eggs just laid, left in the old hive, and the old bees which remained there commenced to build up some queen-cells, and sealed them over, but before any of them were hatched out, the old bees came out of the hive and went to parts unknown. He examined one of the queen-cells, and found a queen in it that would have come out in a few days. What greatly puzzles my friend is, that the old bees would leave the colony *without a queen*. He says he is sure the colony was queenless. Can you explain the freak? E. CROMPTON.

Rosemont, Ont., Can., June 3, 1881.

Although bees do perhaps, sometimes, come out and go off without a queen, it is a very unusual thing. In the case you mention, I should be inclined to think some stray queen got in there, and went out with the bees; but in that case some of the cells would be very likely to have been torn down. If the bees starved, and went off and united with some other colony to avoid starvation, the case would not be a very unusual one; but, if I am correct, you are sure such was not the case, friend C.?

FRAMES OF CANDY FOR WINTER FEEDING.

In feeding sugar candy in frames, you say, be careful that they do not build comb in the frames after the candy is taken out; now, what is the harm if they do? A. A. AMIG.

Buck Creek, Richland Co., Wis., Aug. 3, 1881.

Friend A., it takes about 20 lbs of sugar to make 1 lb. of comb, if done in that way; whereas, by the use of fdn., we get much nicer combs at a cost not exceeding, say, 4 lbs. of sugar. Besides, the bees seldom build a nice full comb in the place of the candy, but only a piece that must be broken out and melted up into wax, which brings only about the price of 2 pounds of sugar. Again, the bees seldom take all the candy from a frame, especially in cool or cold weather. It is left at the corners and lower edges. With the candy bricks, or round or oval cakes of candy placed right over the cluster, we get it used up, every particle of it. Frames of candy is a quick way, and does very well for warm weather, if you look out for this one feature of comb-building. Give the bees frames of fdn., where you want more combs, then put your candy in 1-lb. bricks, right over the cluster, and they will build out the fdn. beautifully, and with but little loss of material.

GOOD REPORT FROM ONE HIVE IN THE SPRING, ETC.

From one colony in the spring I have increased, artificially, to nine, and are now in good shape for winter. Also I have taken 127 lbs. of honey from that colony and its increase; 70 lbs. of comb honey from parent stock; the rest extracted from increase, and did this during white-clover and basswood bloom. We have no fall honey, on account of dry weather. I use the American open-top frame with no wire attachments or any thing of the kind; so, please do not say too many hard things against the American frame, for I think I have done well. What think ye? Do I deserve a head-mark in my class, the State of Indiana? I believe we are all spelling for the head, anyhow. A. COX.

White Lick, Boone Co., Ind., Nov. 8, 1881.

I have never intended to convey the idea, friend C., that as good results could not be obtained from the American as any other frame; very likely, nearly as much honey would have been stored in a nail-keg or a hollow log; but with the latter it might have caused you a great amount of labor that would have been saved by a simple-frame hive.

DIFFICULTY OF FEEDING EVEN CANDY, IN WINTER, ETC.

I went into winter-quarters last fall with 24 colonies, all of them nicely packed in the Root chaff hives of my own make, most of them in fair condition, as I supposed; but the long severe winter was too much for them. By the middle of Feb., most of them were short of stores, and the best I could do I could not get them to take feed readily. I tried both candy and syrup made from A sugar. I saved 8 colonies, 6 of them strong and 2 weak and queenless; so in reality I had only 6 in spring, as it took about all they were worth to keep them up by supplying brood from the others until they could raise queens. I think I would have got them all through except 2 or 3, if they had not been short of stores, as but 2 or 3 showed any signs of disease. From the above, I have this summer increased to 40 colonies by artificial swarming. I raised all my own queens except 5, which were bought of Mr. Oliver Foster; but I have sold more than that number. My 40 colonies are all nicely packed in chaff, and all strong in bees and honey, except two which I am feeding. Besides the above increase I got 300 lbs. of extracted honey. This is my first report; but as I consider myself one of the A B C class, I hope it will not be the last. J. K. Snyder.

Tiffin, Johnson Co., Iowa, Nov. 7, 1881.

FRIEND TOWNSEND'S REPORT.

Commenced last May with 62 colonies of Italians; extracted 2415 lbs. white honey, and took in sections, 1200 lbs.; also some extracted fall honey of which we kept no record. Most of our honey was gathered from first crop of red clover. Of the 62 colonies in May there were 7 colonies which did not help gather our surplus, as W. Z. Hutchinson sent for them to help him rear queens (I should like to know how much they helped him). Our sales of bees and queens amount to $447.00; last sale of the season, Sept. 7. I have 86 good colonies now on hand. Now, Mr. R., or any other bee-keeper, when you pass through this part of our State again you must not slight us, but give us a call at least, for now you will not have to walk 10 or 12 miles, as it is not more than 1½ miles from our apiary to any of the depots in town. Wishing all *busy* bee-keepers good success, we will close our first scraps from Kalamazoo.

O. H. Townsend.

Kalamazoo, Mich., Nov. 10, 1881.

CROSS BEES, BUT GOOD HONEY-GATHERERS.

My bees have been very cross this year. A person could hardly be within two rods of the hives for five minutes without being stung. The second swarm, on the 26th of May, came off while I was away from home, and they were so cross that the folks dared not attempt to hive them. Father went near them at first, but they attacked him with such fury that he had to beat a hasty retreat with about a dozen stings about his head and neck. They hung in an apple-tree about two hours and then left for parts unknown. My queens were nearly all from a selected tested queen purchased from you in 1880. She was replaced this summer, and the progeny of the young queen are almost pure black. I commenced the season with 15 colonies. I have now 50. I have taken 1100 lbs. extracted, and 225 of comb honey. A. G. Willows.

Carlingford, Ont., Can., Nov. 8, 1881.

CHAFF CUSHIONS AND VENTILATION.

And so the chaff hives do not give enough ventilation! wish I had known it last year, and I might have saved all my bees. Late in the season I concluded that the cushions (6 in. thick) gave too much ventilation; took them out; filled upper story *full* of fine chaff. Result: of 42 colonies (one of them a 2-frame nucleus, and several 3 and 4 frame), two lost their queens; one starved; one, a strong colony, died of dysentery; caused, I think, by excitement and unnatural heat, caused by chaff getting among combs. The rest came through in fine order.

M. Frank Taber.

Salem, Columbiana Co., O., Nov. 11, 1881.

I can't quite agree with you, friend T., that your loose chaff made trouble. The best wintering I ever had was where the bees ate through their covering, and the chaff came down all among them, so they were nosing around in it like a lot of mice. I can hardly think loose chaff ever smothers bees; but I should be more afraid of the cloth that holds the chaff in the form of a cushion.

RIGHT OR WRONG? (SEE NOV. NO., P. 567.)

On page 567 of Nov. Gleanings I notice the loss of a queen by fire in a postoffice, which also burned. I inferred that the customer wished you to stand the loss. I think he might as well ask you to bear the loss of an absconding swarm of bees simply because he bought the hives of you. Now, if the postmaster saw the cage of bees taken from the mail the night previous to the fire, he should stand the loss, as it appears that your part of the contract was filled; viz., to "deliver at the nearest post or express office." Whether she was dead or alive, it would have been all the same in that case. I take it that perhaps it was a $1.00 or $1.50 queen (for I don't think any other kind of a customer would growl), and if it was, and he still insists on having his money refunded, just send his name to me, and I will pay it to him.

And now, friend R., I don't know but that you are "tempting" some, in your proposals to "make things good." I think the fair way is for each to be willing to bear his part, and the one to stand it who is to blame. Perhaps you may feel delicate about sending his name; if so, let him send it, and I'll send him his money. J. J. McWhorter.

South Lyon, Mich., Nov. 8, 1881.

Many thanks, friend M., for your very kind words; but if you will excuse me, I fear you are such a very warm friend and champion of my poor self, that your judgment is a little biased. I decided at once as you have, and it seemed then to me preposterous that any one should take any other view. But as the matter did not lie easy on my conscience, I put the question to the boys and girls at our noon service. Mr. Gray and Neighbor H., after a little thought, both to my surprise, decided rather against me. They put it this way: The spirit of my advertisement is to the effect, that I will faithfully deliver the queens where they are easily accessible to my customer, as he delivers my money where it will be easily accessible to me. The loss occurred so near the dividing line, between delivering and accepting property, it was pretty hard to say just where my responsibility ceased and his commenced. Therefore a fair way would be to share the loss equally, which was done, and he, in a very gentlemanly way, expressed himself satisfied. In thinking it over since, it looks as if I ought to do a little more than half, for I expected to deliver his queen at a point where he could go and get it. I did not do this. By the way, I do not know that any act I ever did has called forth such bitter and unkind words as the one of proposing to be responsible for my advertisers. You too, my good friend, are censuring a little, and yet you have, right in your letter, yourself asked to be permitted to pay somebody else's bills. The *Sunday-School Times* was my precedent for my position toward my subscribers in protecting them from spurious advertisers. Here is their offer:—

> The Sunday School Times intends to admit only advertisements that are trustworthy. Should, however, an advertisement of a party not in good standing be inadvertently inserted, the publisher will refund to subscribers any money that they lose thereby.

Will you send me to the asylum as a lunatic, if I still adhere to my purpose of protecting my *subscribers?*

JUDGES AT OUR FAIRS, ETC.

The fourth annual fair of the Southern California Horticultural Society closed on the 10th of Sept. It proved a success all the way through; the bee-keepers of Southern California made a fine display of honey (both comb and extracted), bees, bee-hives, and implements of the apiary. I entered but four articles, and received a premium on each. First premium on honey vinegar and hybrid bees; second premium on Italian bees and comb fdn. There was considerable sport made about the judges whom the society appointed; one was a groceryman; the other two, I was unable to learn their occupation. They all might have been good judges of honey, but when they came to the rest they knew nothing about it. When they came to the comb fdn. they wanted to know what it was made of, what it was used for, and how it was used. When told, they said they could see no difference in the make of it, so they decided in favor of the white. Inclosed you will find sample of both kinds; white, first premium; yellow, second premium. The yellow is my own make, made on the 9-inch C. Olm mill. Hold them up between you and the light, and notice the difference in the bottom of the cells. Which do *you* think is the better one? Speak right out.

Los Angeles, Cal., Oct. 30, '81. W. W. BLISS.

You are right, friend B.; the machine on which the sample of white fdn. was made was very badly adjusted, and the material is quite unsuited for the purpose, compared with the yellow. I know the judges are often sadly at fault; but, poor fellows, they doubtless did the best they could, where they had been placed. Men should have occupied these positions, capable of judging; but if the proper men stayed at home during the preliminary meetings, what better could the officers of the fair do? Suppose, friend Bliss, you pitch right in and help them to do better next season. I am sure they will gladly welcome you at the time they choose the officers, etc.

MISSIONARY BEES.

The inclosed letter explains itself. You will see by it my bees have been doing some mission work, and I hope it will do you as much good to read the letter as it did me. Surely it is more blessed to give than to receive. C. A. HATCH.

Ithaca, Richland Co., Wis., Nov. 8, 1881.

MR. C. A. HATCH: — Our society has sent me the barrel of honey that you kindly sent to our treasurer, Mr. Coe, and I am happy to convey to you in behalf of the poor children cared for in this house, their grateful thanks for your sweet gift. We give the poor children of the Industrial School, generally, syrup with their bread at noon, and when they got the honey on their simple lunch they declared it was the best syrup they had ever tasted. One or two, more knowing than the rest, let the others into the secret, and they were greatly surprised at getting such a treat, as it "wasn't *Christmas*." The newsboys and bootblacks, who are also fed and lodged here, have been greatly delighted with the honey, and I am sure, if you should come to New York and let yourself be known as the gentleman who sent the honey they would load you with the latest news, and "shine" you up in the highest style of the art.

GEORGE CALDER,
Sup't of the Children's Aid Society.

New York, Oct. 25, 1881.

Notes and Queries.

IT is again this season very dry here; bees are suffering. I have worked with bees for several seasons, but the seasons are so very bad that I can do but little with them. I have, of course, increased some, but they are making no surplus honey at all here, and have not for several years. This seems to be a poor bee country. I like very much to handle bees. H. WEHRMAN.

Truxton, Lincoln Co., Mo.

MY TEST OF PURITY.

When you take out a comb of young bees, if they run and tumble off the combs they are not pure Italians, and I do not want any black blood in my bees. The 2-story 8-frame L. hive is my choice.

Purdy, Mo., Oct. 8, 1881. M. TERRY.

Father bought me two colonies of bees this spring, and he and I found four bee-trees this fall, so you see we want to gain all the information that we possibly can. We have not cut the trees yet.

HENRY L. ROUSE.

Ionia, Chickasaw Co., Ia., Oct. 31, 1881.

The 244-lb. scales were just "boss" for that money. Here they would cost about eight or nine dollars. I have sold honey this summer to the amount of $73.47, and have used and will use 200 lbs. more this winter, making in all about 800 lbs. honey from 12 swarms. Increased to 32; lost 5; one was robbed out. We have had a 6-inch fall of snow.

ALBERT OSBUN.

Spring Bluff, Adams Co., Wis., Nov. 7, 1881.

HOW DOES HE KNOW?

Unless Mr. T. R. Butler (page 546) has his queen marked, "as they do hogs down South," how can he know that the queen producing black bees is not a daughter of the old queen, impurely fertilized — the old one being dead, or retired on a pension?

J. L. VAN ZANDT, M. D.

Dido, Texas, Nov. 8, 1881.

[Very true, friend V.; how are we ever to know there has not been some change in the queens unless we have some better way of marking queens than any yet devised?]

I began with one hive, and am now one of the largest bee-keepers in the north of Scotland, if not *the* largest. G. W. RIDDEL.
Leslie, Aberdeenshire, Scotland, Oct. 13, 1881.

I did splendidly at the great Toronto fair, beating for "largest and best display" of honey our great D. A. Jones, of Beeton. EDMOND NUGENT, M. D.
Strathroy, Ont., Can., Oct. 1, 1881.

Happily, late this fall the bees gave me a lift in the way of a nice lot of surplus honey that helped me out of a close financial place; so I am not cramped, if I did not get to sell any bees.
J. J. KISER.
Des Moines, Polk Co., Iowa, Oct. 21, 1881.

Please answer this in next GLEANINGS: Are the Holy-Land queens yellow or dark? I bought one of I. R. Good. She is quite dark — more so than Italian queens. J. W. MARSHALL.
Constantine, St. Jo Co., Mich., Aug. 12, 1881.

[Dark, as a general thing, friend M.]

MULTUM IN PARVO.

Wet soft weather; 19 queens in the spring; 47 now; most of them heavy with stores and bees; about 800 lbs. white honey, extracted; three or four hundred to extract; about eleven or twelve hundred of box honey; some over 2000 in all. Extracted, 8 and 12c.; comb, 15 to 18c. per lb. V. W. KEENEY.
Shirland, Win. Co., Ill., Oct. 24, 1881.

I have 107 stands of bees on shares. Our bees gave us 7000 lbs. of surplus honey so far this season, while others have done comparatively nothing. Friend Wilkin was up to see us the other day, and he said he never saw bees thriving nicer. They are still breeding very heavily. I am now Italianizing.
O. B. QUESNER.
Newhall, Los Angeles Co., Cal., July 22, 1881.

A THREE-COLONY APIARY.

In reference to bees, my wife is pleased with her success. We have extracted about 160 lbs. from 3 colonies, and made a colony by dividing. We got an Italian queen, a good layer, and one colony is now mostly all Italianized. The four are in 2-story Simplicity hives, 2 of which you furnished. I would not have any others now. B. H. LEMON.
Thorold, Ont., Can., Aug. 6, 1881.

HAPPY ANYHOW.

Bees are doing no good with the most constant care. I have gone back from 85 to 73 swarms, and made no honey; it is constant work to keep out the worms. There is but little feed, but it may be all for the best. We are getting a good training this year, even if we do have to work for no money. We are happy and thankful, for the spiritual food is worth all others. I. B. RUMFORD.
Bakersfield, Kern Co., Cal., Aug. 4, 1881.

I had a call for "oil of honey." What is it, and how obtained? This was not an extra season for bees here. I report as follows: 20 stocks in the spring, and 26 now; have taken 1200 lbs. of honey, 150 of it comb. Sold all I had to spare, by Aug. 20. Two other bee-keepers near here took about 1000 lbs. each. I have been out some time.
W. C. HUTCHINSON.
Acton, Marion Co., Ind., Nov. 1, 1881.

[Who will tell us what "oil of honey" is?]

In last GLEANINGS we notice that you contemplate having a "square" and "crooked" list. It is our desire to be placed in the list of "square" men, but our greatest desire is to *merit* a place in that list. We think that our past contracts are all square; should we be mistaken, we are ready to make them so at once. FISCHER & STEHLE.
Marietta, Wash. Co., O., Oct. 14, 1881.

[That is exactly the way we like to hear our advertisers talk, friends F. & S.]

HONEY FROM CORN.

In answer to your question, if bees gather honey from common field corn, I will say, they will. Corn on good *rich ground*, well hoed, so the corn will thrive well, will yield some honey. I have got more *corn honey* this year than I ever got from corn before. My bees gave me over 200 lbs. each of extracted honey the past summer, and doubled the stock of bees.
WM. MCEVOY.
Woodburn, Wentworth Co., Ont., Can., Oct. 19, 1881.

HOW THE HONEY-BEES HELP.

I herewith inclose check on New York for $25 00. I received this money as premium on hives and honey at our State fair in Macon last week. We have made almost an entire failure in crops this year; corn and oat crop an entire failure, and cotton yielding about one bale to five acres, so you see how hard it has been to raise money. The honey crop is good, and has helped wonderfully in meeting our daily wants. F. N. WILDER.
Forsyth, Monroe Co., Ga., Oct. 21, 1881.

BLACK BEES BETTER THAN ITALIANS TO WINTER.

I have three apiaries, with about 40 stands in each. The bees of the home apiary are Italians; the two others are blacks. I can not winter the Italians as well as the blacks. A year ago I lost 7½ Italians to one black swarm; last winter I lost 10 to one. I have a large dry cellar, and have always wintered blacks successfully. I keep them in 5 months, or from the 1st Dec. till April or 1st of May. I have brought all home to winter. JOHN ANDREWS.
Patten's Mills, Wash. Co., N. Y., Oct. 29, 1881.

SHALL WE USE SEPARATORS ?

I see you request the friends to give their experience with separators. I used them one season, but could not get the bees to do much in them. I find one section in a great number that I can't pack in the case, but I can eat that. I don't think I would be bothered with separators. Our comb honey sells out here better without glass. I put my sections in the upper story, mostly four in a large frame.
ROBERT QUINN.
Shellsburg, Benton Co., Ia., Oct. 14, 1881.

I confess I feel a little slighted. Next time you visit Prof. Cook just let me know, and be sure to buy your ticket only to Fowlerville, and I will meet you there, and after showing you my farm, etc., will take you up to the college in a buggy. May be we haven't such fast horses as "Patsey," but they will "get around sure." F. L. WRIGHT.
Plainfield, Michigan, Aug. 11, 1881.

[I am very sorry indeed, friend W., I was so near an old friend and customer and didn't know it. When I get up that way again, I will assuredly come and look at that farm, bees, etc., and take a ride over to the college. I dearly love rides through the country.]

HONEY FROM CORN, AGAIN.

I must tell you that I often get a lot of nice white well-flavored honey from corn — common Indian. I think I can't be mistaken. I have gone into the fields and made observation, also at times when bees were getting honey from *no other known source.*

W. H. STEELE.

Kossuth, Alcorn Co., Miss., Nov., 1881.

HONEY FROM PEAS, OAK, ETC.

I have 20 hives; they have not done much this year; they are gathering honey from peas now. I saw in your last number that bees had gathered honey from willow roots. I found a bee-tree that had been gathering it from white oak where it had been bruised. The honey tasted like sap.

J. H. MATTOCK.

Horn Lake, Desoto Co., Miss., Aug. 7, 1881.

FROM ONE TO THREE, AND $16.00 WORTH OF HONEY IN ONE SEASON.

I commenced the spring of 1881 with one swarm of bees, and now have three strong swarms; have sold $16 worth of section honey. As I am a beginner, I feel much encouraged, and think girls can take care of bees as well as boys or men. Father takes GLEANINGS. We find it interesting and useful.

IDA M. CHURCH.

Benton Harbor, Mich., Nov. 12, 1881.

HILL'S DEVICE FOR WINTER.

I see your problem solved on page 530, and can assure you that it will not cure nor prevent dysentery. It is as good as the *best* winter passage, because not solid like a block, but leaves a nice circulating space. I have used it three or four years. See GLEANINGS, page 116, 1881, 3d paragraph under cut of my hive. I think I wrote about it to some bee journal about two years ago. My way of using, the curved pieces can't flatten down when dampened.

Dowagiac, Mich., Nov. 14, 1881. JAMES HEDDON.

Reports Encouraging.

I AM getting a nice start in the bee business. I tried it 20 years with the black bees and box gum, and at the end of that time I would have valued my stock at $5.00. With the help of GLEANINGS and other works on bee culture, I have built up a considerable apiary. I use the Simplicity hive and the Lawn hive. I have an imported queen, and use the extractor. My business is paying me for all my trouble and investment, and I have bees and honey plenty, and something nice at that, and selling queens besides. I find bee culture under present management both a pleasant and profitable business.

E. E. SMITH.

Settle, Iredell Co., N. C., Oct. 14, 1881.

I am in good spirits. I have taken about 1000 lbs honey; about ⅔ extracted, the rest in sections. I have nearly Italianized from the tested queen you sent me. She produces many full 4-banded bees, and out of 20 young queens, none have failed to produce 3-banded bees, and I know that some of them must have met black or hybrid drones. I go into winter-quarters with 26 colonies, all very well supplied with honey.

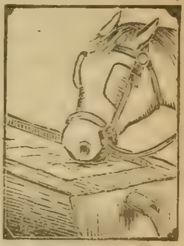
J. D. FOOSHE.

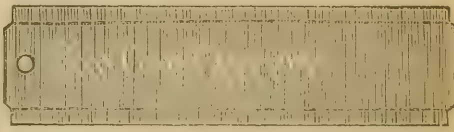
Coronaca, S. C., Nov. 3, 1881.

MR. MERRYBANKS AND HIS NEIGHBOR.

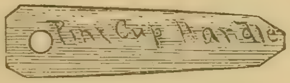
Fear not, little flock; for it is the Father's good pleasure to give you the kingdom.—LUKE 12:32.

THE new watering-trough was patronized amazingly. John had rigged up a sort of work-bench down in that playhouse, that you remember he styled his Temperance Hotel, and he enjoyed so much seeing the horses drink, as they came a little shyly at first up to the new trough, he actually dreamed of seeing horses drinking at night after he had got to bed. The water, bubbling as it did right out of the sandy rock, was always fresh, soft and cool, and no horse ever refused to drink there, even if he had been watered but a half-hour before out of some muddy, stagnant pool. The tinner's shears had not yet been carried home, and John had become quite expert with them, fashioning things out of the tin he got out of some oyster-cans that had been so recently emptied they were comparatively clean and bright. In fact, he made the tin cup I promised to tell you about last month, and he became so fond of the business, the passers-by joked him by saying he had better put his sign, "TEMPERANCE TIN-SHOP," rather than "HOTEL." Shall I tell you how he made nice-looking cups out of oyster-cans? Well, he just cut them open near the seams, so as to get a piece of tin 3 by 12¼ inches. One oyster-can made just two such pieces. After the tin was nicely flattened by a little wooden mallet, he marked it out accurately with his father's square, and then cut it exactly on the line with his snips. After this he snipped off every one of the four corners until his tin looked about like this:—

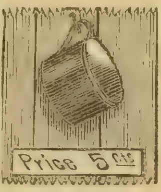

JOHN'S DREAM.



Next he folded an edge on each of the long sides, where you see the dotted lines. He did this by laying it on the square with the edge projecting just enough, and then turned it down with his mallet. He did not pound this seam down hard, for he wished it to look as much as possible as if a wire were turned under the fold. One edge was turned over one way, and the other the other. Well, after this was done he folded it around his mother's potato-masher by means of his mallet, so it looked much like a cup without handle or bottom. The ends were slightly curved with the mallet before rolling it up, so they lay on each other nicely, ready to solder. The clipping, as you see, made no seams or folds where the lap came. Neighbor Merrybanks good-naturedly loaned him his soldering-iron, with the understanding that John was to pay for all the solder he used, and keep the iron in good order. You know I said one seam was turned out and the other in. Well, with his father's compasses a true circle was marked out on another piece of tin, and when made just the right size, and cut out, it just pushed into the cup. It would go into the top very well, and when pushed down to the bottom it came solidly against the seam that was turned in to hold it. It came down into place so securely it almost seemed as if it would stay without solder. However, as John's cups were to be useful as well as ornamental, it was soldered securely. Mary and Freddie were loud in their praises of the cup, because it actually did not leak a drop all the while they were eating supper, yet it was left on the work-bench, brimming full. Freddie said they bought a tin cup of a peddler, and it would not do that. After supper, a handle was made of a piece of tin that was left. The handle, when cut, looked just like this :—



After he got a cup made so he knew it held exactly a pint, he made a careful pattern and punched a hole through it so it could be hung up on a nail. He also wrote on every pattern the name of it, as you see in the pictures, so no mistake would be made. The edges of the handle were folded, much like the body of the cup; and, to get the right shape to it, he folded it over his mother's rolling-pin, so as to be bent exactly like a cup they had in the house. After he had got one to suit him with the aid of the patterns, it did not take very long to make another; and, at the suggestion of Mary, this second one was hung on a nail just over his bench, with a little board under it, marked as you see below :—



Just as they got it nicely fixed, Uncle Billy drove past; and, seeing the children looking up at the cup with such interest and animation, he glanced up too.

"Only five cents? Why, I guess a new tin cup is just what I want;" and he took a nickel out of his pocket and handed it over.

"John made it, all his self," ventured Mary, for the success of her plea for the little trough had made her somewhat bold.

"Is that so? Why, where did he get his tools for a tin-shop?"

John, a little shyly, told him they were there on the bench. While Uncle Billy was looking them over and asking questions, the doctor drove up with his boy Tom. Of course, all had to look at the cup. The doctor gave an order for half a dozen, explaining that he preferred it to any he could buy, because John had done all of the soldering from the outside. Solder contains a considerable portion of lead, and as lead is to a certain extent poisonous, it is very desirable that all kitchen utensils, especially fruit-cans, should be soldered only on the outside. Mary clapped her hands at the prospect of so much money; but John looked a little downcast, because he did not know how he was to get so many bright clean oyster-cans. He timidly mentioned something of this, when Tom interposed.

"Why, father, he can buy new sheets of bright tin. I can get some for him when I go to the city to-morrow."

"Yes," said uncle Billy, "I happen to be acquainted with the tin-smith there, and I will send a line to him, asking him to let you have it as near box prices as possible."

John was troubled still, for the nickel he had just received for the cup was all the money he had in the world. But a brave boy as he was, though, he spoke right out; and at the same time he thanked them he told them the trouble.

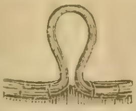
"Why, look here," said the doctor; "here is the money for the six, in advance."

"And here is the money for six more that *I* want," said uncle Billy. "It is a pity if we can not give the 'Temperance Hotel' a lift when it is just starting out;" and he gave the doctor a look that was understood, as he laughed good-naturedly. Tom took the money, and promised that the tin should be on hand by the next day noon, if nothing happened, and off they all went. John could hardly keep back the tears. What did it all mean? and how was it that even Tom seemed so pleasant and accommodating? His mother told him it was simply the working out of the promise in the text at the head of our story this month, and that he might reasonably expect people in this world to be willing to help those who are trying hard to help themselves. At a little before noon Tom drove up and handed out ten bright sheets of tin for the sixty cents. After the tin was out, he pulled out of his pocket a clean bright bar of nice new solder.

"Why, where did you get that?" said John.

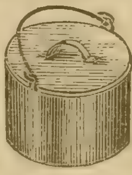
"Oh! I had a little money left, and I thought you would get out before all this tin was worked up, and so I brought it along. It cost just 30 cents." As John looked a little undecided about getting in debt so much he added, "You just lay it in your drawer until you get a lot of cups done, and then I will help you sell them."

John found that each sheet would make the bodies to seven cups, and a half-sheet more would make the bottoms, with scrap enough for all the handles. Before he went to bed that night the dozen were finished, and tied up with strings ready for delivery. Before noon next day, enough were made and sold to pay for the bar of solder. During all this time John was revolving a plan in his head for making a 5-cent pail, on the same plan as his cup. By the time his bar of solder was all his own, his plan was matured. On one side of the cup is a seam, you know; well, right opposite this seam he cut a little notch in the body of the cup, before it was folded up, so as to have a break, as it were, in this folded edge. Well, after the cup was all made but the handle, he with a sharp-pointed scratch-awl raised the fold and slipped in a bent wire, which formed the ears of the pail. The drawing below will show you how the ear was made, and held in position until it could be soldered. The



PAIL-EAR.

ear was bent from a large common pin, after cutting off the head and sharpening both ends so it would push easily into the fold. A piece of wire made the bail, and then it was all ready for a pint honey-pail, only it lacked a cover. A cover was soon made in this way: He made a band for the rim, just like the body of the cup, only it was but ½ an inch wide, and had a fold on only one edge. This fold was on the outside, like the cup, but the band was of such size that it slipped right inside the pail until stopped by the folded edge. A plain circle of tin, made as large as the outside diameter of the pail, was soldered on this hoop, as it were, so as to project equally on all sides. After the cover was put on the pail, the edge of the tin was rubbed down smooth with his hammer-handle, and the pail was done, only the cover needed some sort of a handle. This was made by folding the edges of a strip of tin, somewhat like the cup-handle, only it did not taper. Here is the whole pail and cover, just as John made it. Of course, Mary and Freddie were anxious spectators during the whole; and the minute it was done, all trooped into the house to show the wonderful new tin pail, cover and all. Mary fairly clapped her hands with delight, and John was so excited when he undertook to fill it with water, to see if it would leak, that he dipped his hand into a pan of milk, and then started to the spring after some water with a basket. To the chagrin of all the group, it leaked; and John had to wipe it dry and go over the soldering again. This was quite a shock to his pride as a workman; and as Freddie was a little inclined to quote his father as a superior workman all the time, John made some pretty big resolves, that hereafter *his* pails and cups should never be brought back because they leaked. Mary wanted to carry it over to the neighbors to show, but first stopped to ask what the price would be.



JOHN'S PAIL.

"Five cents," said John.

"Why, the *cups* are worth only five cents, and this is ever so much more work."

"Can't help it," said John. "Ten cents would be too much, and we can't bother our customers with odd coppers in making change. If they are cheap at five cents we shall have the more to make, that is all."

John sat down to the task of making a better one, and one that would not leak. Mary was soon back, all out of breath.

"Mr. Merrybanks says he wants a dozen just like it to put honey in, and here is the 60 cents."

John was already a man of business, and no mistake; and with the pleasure and joy that he felt in being able to earn money fairly and honestly, there came a little worry about his ability to take care of all the trade that seemed piling in. At this juncture, our jolly old friend came up with the pail in question.

"John, you have opened up a streak of business and no mistake; but, my boy, you must not stick to it too closely. You are tired now, are you not?"

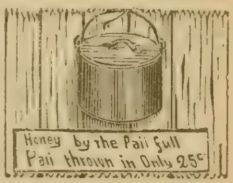
Come to think of it, John thought he *did* feel a little tired.

"Well, it is best to take things with moderation in this world. Where is your father?"

"He, with the horse, is at work for Uncle Billy to-day."

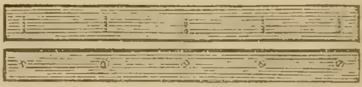
"Well, that is good, isn't it? Well, you see these pails of yours hold just about 1½ lbs. of honey easily, and at present prices should retail for an even 25 cents. Now, as it is quite a bother for me to run to weigh out honey, suppose you keep a few of these pails full here, and put out a sign, and I will give you 10 per cent commission. Here is a pailful to commence on."

In a twinkling the pail of honey was hung in a conspicuous place, and under it was a board that read like this:—

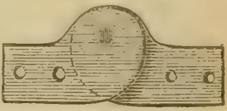

Honey by the Pail Full
Pail thrown in Only 25c

"Now," said neighbor M., "you want some better mode of folding your tin for cups and pails. Haven't you got some little boards here? Freddie, will you run over and get that piece of galvanized iron on the work-bench?"

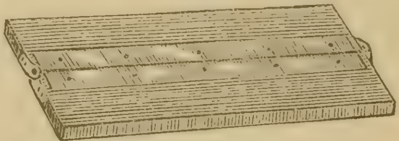
The sheet iron was brought, and from it were cut four strips, 4x14½ inches. At intervals near one edge, holes were drilled large enough to receive common wood screws. In one of these pieces, the holes were all filed oblong, with a round file, as in the cut below:—



Next, two hard-wood boards, 4x15½, were provided. They were laid side by side, and then hung together with a hinge nailed into the end of each board. The hinges were made of the galvanized iron, by riveting one strip to the end of another, thus: The small holes show you where it was nailed in the ends of the boards. Now three of the above strips were laid on one of the boards, and screwed fast. The piece with the oblong holes was the center one, and thus by loosening the screws at any time, the width of the fold could be adjusted. The third piece was put on the other board. It was soon done, and looked like this:—



HINGE FOR FOLDER.



FOLDING-MACHINE.

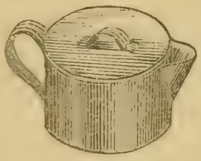
John found, to his great delight, that he could fold his seams with this by just putting the edge of the tin under the galvanized iron, so quickly that it seemed almost like magic.

"Now," said friend M., "Come over in my orchard and get some ripe apples, and play around a while as boys usually do, and then you can make pails, and five-cent coffee-pots too, if you like."

It is Saturday night again. The family are, as before, sitting on one of the logs that go across the bridge. On the front of the "Temperance Hotel" are hung pint cups, half-pint cups, quart cups, pint pails full of honey, and not full. John's father has got some money that he has earned himself; so has John's mother; so has Mary, that she got from selling cups at a commission of "ten per cent." John's father has just repeated the text at the head of our chapter, and asked his wife if it can really be such as he whom Jesus meant when those words were spoken. John's mother reminded him that, as it was Saturday night, he had better take down his things and put them away.

"Please let them be up a little longer, mother; I am sure somebody will be along and want something more."

In a few minutes more he came out of the "Hotel" with a bound, exhibiting his new five-cent coffee-pot. Shall I give you a picture of it? Do you wonder, dear reader, that all that little household are happy, and that their faith in God and the future is bright, this Saturday night?



FIVE-CENT COFFEE-POT.

TOBACCO COLUMN.

A FRIEND sends us the following for this department: —

Prof. Bascom writes, with regard to the cultivation of the tobacco plant: —

"Take the land, the sunshine, the rain which God gives you, and set them all at work to grow tobacco. Throw this, as your product, into the world's market; buy with it bread, clothing and shelter, books for yourselves, instruction for your children, consideration in the community, and, perchance, the Gospel of Grace; pay ever and everywhere, for the good you get, tobacco, only tobacco — tobacco, that nourishes no man, clothes no man, instructs no man, purifies no man, blesses no man; tobacco, that begets inordinate and loathsome appetite and disease and degradation, that impoverishes and debases thousands, and adds incalculably to the burden of evil the world bears. But call not this exchange honest trade, or this gnawing at the root of social well-being getting an honest livelihood. Think of God's justice, the honesty he requires, and cover not your sin with a lie. Turn not his earth and air, given to minister to the sustenance and joy of man, into a narcotic, deadening life and poisoning its current, and then traffic with this for your own good.

"Some years since, the annual production of tobacco throughout the world was estimated at four billions of pounds. Allowing the cost of the unmanufactured material to be ten cents a pound, the yearly expense of this poisonous growth amounts to four hundred millions of dollars. Put into marketable shape, the annual cost reaches one thousand millions of dollars. This sum, according to careful computation, would construct two railroads around the earth at twenty thousand a mile. It would build a hundred thousand churches, each costing ten thousand dollars, or half a million of schoolhouses, each costing two thousand, or it would employ a million of preachers, and a million teachers, at a salary of five hundred dollars.

"What more effective, pathetic appeal to the head and heart can be made than by these figures? Two millions of tons of tobacco annually consumed by smokers and snuffers and chewers, while from every part of the habitable globe are hands stretched out imploringly for the Bread of Life, which must be denied for lack of means to send it!

"In Great Britain alone there are not far from three hundred thousand tobacco-shops. England has obtained a larger revenue from this source than from all the gold-mines of Australia. In Germany, Holland, Great Britain, and the United States, official figures show that it costs more than bread."

Inclosed please find $1.00 for GLEANINGS. I would be entirely lost without it. The other dollar is for my broken promise. 'Tis true, I smoked only one little cigarette, but it was a little too much.

L. L. E.

I am both sorry and glad to get the above. I have been for some time rather worried, for fear all those who have given this public promise were not strictly truthful, and now I know that at least two of you are. I am very sorry, friend E., you have yielded to temptation, and I fear your so doing will weaken some other weak brother; but I rejoice that you come right out and confess your wrong, and hand over the dollar. May the Lord bless you in this! But I am sure he would bless you still more in leaving off all such bad habits at once and for ever, even though you have failed once. You have done all you agreed to do, and nobody has any right to find fault.

By reading your tobacco column I came to the conclusion that there are black sheep among your flock. If a man promises to quit smoking and chewing for the sake of a bee smoker, there is certainly something wrong. I am smoking, and my conscience tells me, "You do no sin." Why does the great Creator let it grow if it is a sin to make use of it? Can you tell me of any other use for it but to smoke and chew? Why, then, condemn God's plants? Can't you call it such? If not, who else lets it grow? You may say whisky is the drunkard's grave; that is certainly true. I am strongly against the use of strong drinks. But whisky is a necessity; we must have it in medicine. But tobacco can not be used in medicine; and if I tell the truth, I smoke tobacco for my health. I am not ashamed to have it appear before your readers. People must be very pious in Canada, the way a Canada Pharisee advertises regarding tobacco. PRESTON J. KLINE.

Coopersburg, Lehigh Co., Pa., Nov. 7, 1881.

Gently, friend K. If I mistake not, the letter you have given us above is a rather telling one against the use of the weed, to the average reader. I hardly believe you would wish your own boys to grow up tobacco-users, when it could as well as not be avoided. I can call to mind two cases in which tobacco is used as a medicine. Your own case is one, and my wife uses it in the form of an ointment, as a counter-irritant to cure the croup. If I am right, poison ivy is not used as a medicine, or otherwise; yet I never knew any one to insist it should be used to chew because God made it, and it must be good for something. Our Canadian friend meant to say, in his advertisement, "tobacco and liquors," instead of "tobacco and cigars;" and I thank God they have just so much "piety" in Canada. Do you know, friend K., that no students can be received at our Government school at West Point if they use tobacco?

Our Homes.

It is the Lord; let him do what seemeth him good. —I. SAMUEL 3:18.

READER, have you a father living? I had when I wrote you last, and in fact I have always had a father from the first moments of my recollection until up to within three days past. I have tried to teach you here to learn to think it is God's hand through all the events of life, and especially through the *trying* events. I am beginning to see his hand through this great sorrow; and although it may seem strange to some, I am beginning to find a new and strange happiness right in the midst of this trial. We are a family of nine — father and mother, and seven children, and no death had ever entered this family circle until father was called, on the 5th of this November, as I have just told you. He who came into Medina County more than 50 years ago, and chopped down the trees to build the log house for us all, has been called away first. He died but a few yards from that very same old log house, the one in which I was born, and I thank God that I was permitted to be with him in his last moments, and to minister to his comfort as he drew his last breath. He had been on his bed of sickness about five weeks. In that time I have learned some lessons. If I am right, God has, during that time, given me some messages that he wishes me to carry to you. That is why I asked, in the outset of this talk to-day, if you had a father living.

His sick bed has taught me how much my father cared for me and loved me. It has also taught me how much I loved him, although I did not until now know it. We are not all alike, and we are far from being alike in our ways of demonstrating our love or our sorrow. I was surprised to find, when my father was sick, that he especially leaned on me and looked up to me; I was the only one of his boys near him. The two others are far away in the West.

When I first undertook the task of caring for him through the lonely night, I felt so utterly helpless and incompetent for the post, that it seemed as though some one else would do far better than I; but soon came the thought, that right where I was, was where God wanted me, and I *knew* that he would be with and guide me, if I put my trust in him, and went cheerfully to work. It was toward midnight, and I shook off the drowsiness that began stealing over me, and knelt in silent prayer near the bedside of my feverish patient. The doctor had enjoined upon me as little talking as possible, and therefore my work was to be a silent work. I had noticed that father seemed to be much fatigued when he rose up in bed to take his medicines, and I therefore set about trying to make this task as brief and easy as possible. A chair was silently placed at the right spot, and on it was a cup of fresh water, his quinine, milk punch, etc. When I was satisfied that I had every thing right at my hand that I might need, I seated myself quietly on the bed, and told him it was time for medicine again. Instead of letting him get up, I raised him gently; and while he leaned on me, supported him with my left hand, while I quickly gave him, with my right, all he was to take, and he was back on his pillow again with much less fatigue than where he was obliged to wait for delays. After that, I watched him in his sleep until I discovered in what position or positions he rested most easily. When he seemed restless in one position, I found I could get him to change, almost without waking him. Not only was fresh water from the pump kept in readiness for the time when he might ask, in his feeble voice, for it, but I managed the temperature of the room so that several windows could be opened a little without the room being too cold, until I had ventilated out almost every trace of the smell that is so apt to accompany fevers of that type. I found, by making a study of it all, that I kept away drowsiness, so far that the night passed rather pleasantly than otherwise. My reward came in the morning, when he told mother (of course, he clung to mother as his best and safest friend on earth) that Amos had taken "such *excellent* care" of him during the night.

A few nights later, when my watch was off, Mrs. Gray and myself rose at 3 o'clock on a frosty morning, and rode down to the old farm to see how he was getting along. I told him what time it was, and he in his feeble voice spoke of the trouble it made us to get up in the night and come so far.

"Father, do you remember, away back years ago, when *you* used to get up in the night in the old log house, to care for *us?*"

"I remember well when *mother* used to get up and carry *you* about." I had been very sickly when quite young.

"Well, father, we are glad of the opportunity of showing that we remember the loving care you both gave us in our helpless childhood. Did you regard it as a hardship then?"

"No." I remember now the pleasant and reassured look that came into his face as he answered me.

In spite of our care he grew weaker; and although he became very tired of the medicine ordered by the doctor, to be taken through the weary hours of both day and night, he took it all patiently. In his younger days he had been much subject to a sort of quinsy in his throat, and he had often expressed a fear to mother he might die of strangulation. He did not fear death, and they both talked it over as familiarly, almost, as of the visit he took to his old Connecticut home, but little more than a year ago. Well, it was toward his last that I was watching with him one night. At midnight he should have taken his medicine; but he was sleeping so quietly I let him lie a half-hour longer.

"Father! it is time for medicine again."

"Yes."

"Will you not get up and take it now?"

"Yes, when I get rested a little." It occurred to me then that he was failing.

"Will you not rise up and take it now?"

Father, in his life, was always very prompt; and even in his sickness, seeming to remember he was delaying, a little to my surprise he turned over and rose up with the readiness of a child, almost before I was ready to support him. I raised the cup to his lips, but wondered his head dropped forward as it did. I asked him if he would not take it, and he roused up enough to swallow a part of it. When asked to take the rest, I discovered he had fainted. I laid him back on his pillow and called loudly for mother. Before she came I saw he was gasping with the strangulation we had feared. I shall never forget the imploring look for help, nor shall I ever forget to be careful in giving medicine to a very weak patient. She turned him on his side, rubbed his throat, and the liquid passed down, but my heart was beating so it shook my very body to think I had, by my want of skill, come so near hastening his approaching end. He assured me, with a bright, pleasant look, that no harm was done, and dropped off again into his accustomed slumber. There seemed to be a providence in this experience, after all. Two days afterward, when I hastened to his bedside, I found he was lying on his back and gasping for breath, something as he did that night. He was dying, but the doctor and friends thought it was his easiest position. I could not think so, and earnestly entreated that he might be turned on his side. I have inherited from him a tendency to throat troubles, and it seemed to me I knew better than any one how he could breathe his last easiest. The friends, out of kindness, had been giving him a stimulus when he was unable to swallow it, and it was producing the same symptoms that so impressed themselves on my mind the night before. Fortunately he had strength to vomit it up, and then he felt much revived. I am thus particular in these little details, because I feel very anxious we should all learn to care for the sick and dying in such a way as to alleviate pain and suffering all we possibly can. Although he revived enough to speak, his breath soon became again obstructed, and at my earnest solicitation we turned him on his side, even at the risk of hastening his death by so doing. To my great relief, the obstruction to his breathing then settled down to one side, so that he drew each breath with such ease that he sank away peacefully, and apparently almost without pain. I will mention here, that for many years I have been in the habit of calling to see my parents, on my way home from our Abbeyville mission Sunday-school, every Sabbath afternoon. Well, after the labors of the school I am invariably in a happy mood, and had often sung new hymns we had learned, to my mother. I do not know that father often said much about them, but mother always liked to have me sing. One day, during father's early sickness, he expressed a wish to see me, and have me sing some of those hymns. There may be others in the world besides my father and mother who like to hear me sing. I can not remember now ever having heard of any, but I assure you it gave me a thrill of pleasure to know I could in this way make his sick bed pleasanter. Well, on this night when his breath was growing shorter and shorter, and we could not catch any further sign of recognition, I felt impressed to sing a little hymn that I found once or twice before seemed to give comfort to those near to death. It is this:—

I know not the hour when my Lord will come,
To take me away to his own dear home;
But I know that his presence will lighten the gloom
And that will be glory for me,

CHO.—And that will be glory for me,
Oh, that will be glory for me.
But I know that his presence will lighten the gloom,
And that will be glory for me.

I know not the song that the angels sing,
I know not the sound of the harps' glad ring:
But I know there'll be mention of Jesus our king.
And that will be music for me.

CHO.—And that will be music for me,
Oh, that will be music for me,
But I know there'll be mention of Jesus our king,
And that will be music for me.

I know not the form of my mansion fair,
I know not the name that I then shall bear;
But I know that my Savior will welcome me there.
And that will be heaven for me.

CHO.—And that will be heaven for me,
Oh, that will be heaven for me;
But I know that my Savior will welcome me there,
And that will be heaven for me.

I may be mistaken, but it seemed to me, by the movement of the mouth and eyelids, that he heard.

A few years ago death was but a fearful dread to me. I avoided funerals and sickness all I could consistently. How changed is it all now! I held my father's hand while he approached the border line of the other world, with no dreary forebodings; for I knew that a Father in heaven was watching lovingly over all that little circle gathered around that bed of death. Had we not the assurance that we were of more value to him than many sparrows? That great love above bound us all together, and there was no need that we should "be troubled, or afraid." In one sense, I was happy, because I knew he liked to have me near him, and I felt that I had been able to make his last moments a little easier. His breath grew shorter and finally stopped. After an interval, came another. Still longer, and another still. After a third interval, came a slight movement and a knitting-up of the muscles around the nostrils — the death pang, as the soul was torn from the body, as it seemed, and then all suffering and sorrow were over. In an instant the movement expressive of pain was gone, and his face had the expression of a child sleeping in peace.

Father was gone! The heart that had beaten only in kindness for me since I first opened my eyes on this broad earth was stilled for ever. No skill of man, not even all the power of the universe together, could bring back one more beat of the pulse we had felt so often. Father is dead! Alone in the world should we be indeed, were it not for God's great love at such a time. How soon memory began going back! Almost the first I can remember of him was the toy wagons and sleds he used to make brother and I; then I remember how he used to carry me, and take pains to show and explain every thing to me in my childhood days. Step by step memory carries me back to the time when, as I grew older, he took so much pains to afford me an opportunity of getting an education; I never saw it before; but there, side by side with his dead body, memory began to bring it out with wonderful distinctness. When I was eighteen I wanted just a little more money to buy an outfit of electrical apparatus, that I might go out lecturing. Money was not very plenty then with him, and I debated quite a while as to whether he would think it best to give me the amount. Although it took about all he had, he took it out of his pocket and handed it me almost as soon as I explained what it was wanted for.

Recently he had been growing old and feeble. I have sometimes wondered of late to see him "up town" so often. The farm is 2½ miles from us. Well, Sunday afternoon I was feeling a great longing to see him, although he had not been dead quite 24 hours. Eliza, who keeps the "counter store," had dropped in to see us. When I spoke of the longing I felt, and regretted I had not improved the time more in going down to the farm to see them oftener, she remarked that he used, almost always, to ask, as he came into the store,—

"Do you know where Amos is at work to-day?"

When told, he would add,—

"Do you know whether he is very busy or not?"

I knew he often came up where I write, and after a word or two went back again. Sometimes I would go down with him, and we would walk over the grounds looking at the honey-plants, etc. Sometimes I showed him our new machinery, the new goods in the counter store, but I did not think he cared so much for these little attentions; neither did I think it would ever come up before me as it does now. What would I give—oh what would I give! if I had those days to live over again? Is it possible I shall awake and find that he is down on the farm still, where his eyes may be gladdened by the sight of his grown-up boy? Dear reader, it is no dream. The time is passed, and he is now in his grave; but listen, and I will tell you of the message God has given me to take to you. Your father, perhaps, is still living. Mine can not be recalled; but yours may still be cheered and made happy. Go to him now, even though it be night, and after dark; carry to him this chapter in Our Homes, and ask him if it be not a message sent from God. God, in his love and mercy, has given me this experience, that I may speak a word for these friends of ours in their second childhood. You little know how they lean on you, and you little know how they feel even a little thoughtlessness on your part. Do you know there is only one among the ten commandments that has a promise with it?—

Honor thy father and thy mother, that thy days may be long in the land which the Lord thy God giveth thee.—Ex. 20:12.

My wife lost her father only a few years ago. Said she to me one day,—

"Amos, while your parents live, do not neglect them. Let your Abbeyville school go; let your work in the infirmary go, if something must be neglected; but do not neglect your parents in their old age. If you do, you will sometime repent it most keenly."

I took her advice, and you can hardly think how I thank God now for that advice. I have been with them almost every Sunday afternoon, for an hour or two, for years back; and yet how I do wish I had gone down oftener on week days, and been out around the farm more with father about his work. About the last work he did was to dig his potatoes, and he got very tired doing it. Why did I not leave my work here and go and help him just a little while? The recollection of having done even that would be worth more to me *now* than all that the wealth of this world could pile up. It was not help he needed, for a boy could have been hired for a very small sum, but it was companionship and sympathy. Through sorrow and affliction has God pointed out this lesson.

Now, the lesson does not end here. Father is dead, but mother still lives; my wife lives; my children, my shopmates. You, my friends, still live, and it is in my power to give you some of that companionship and sympathy of which God has been showing me. I started up street yesterday. A little ahead of me was a child with two pretty big bundles. I can hasten up and carry one, and if she dies before I do, I shall be made happy by thinking of the little act. To my surprise, I found it was *my own* little girl, Blue Eyes. I took both of her bundles, and, I believe, her little soft hand also in mine. May God be praised for the lesson he is now teaching me, and one which I probably needed so much! You know that friend Cook, at the college, talked to me of the danger busy men are in, of neglecting their own family circles. Nothing would make me feel this as does the affliction of which I have just told you. Do you understand the text,—

Whom he loveth he chasteneth, and scourgeth every son whom he receiveth?

Would it do any hurt, dear friends, if all through life we should think, "Suppose that friend should die before I can ever speak to him again"? One after another of you is going. Very often I ponder on the handwriting of some of you after God has called you away. Suppose we form a habit of asking ourselves, "Is this just what I would say or write that man, if I thought it likely he would die before I ever have the opportunity of saying more?" Could you look on his face in his coffin, and feel no regret that it had not been left unsaid? Well, this feeling has brought a new joy and a new happiness. In it I have felt more of God's love, and a purer love to all my friends and relatives. Yes, I know it is a better and a purer love to all humanity. If I hold on to it, it will help me greatly to live in peace with all men.

Nearer, my God, to thee, nearer to thee;
E'en though it be a cross that raiseth me.

As we were about parting for the night, a neighbor, a most kind old man who had known my father and mother since the time when they first sought their home in the woods of Medina County, took her hand at parting and spoke the words of my opening text to-day—"It is the Lord; let him do what seemeth him good." I at once began wondering where in the Bible I had seen it, and soon remembered it was the words of the good old Eli, when Samuel told him of the Lord's reproof. Few I have found in this world who could say this at once, and through all troubles and trials as they come up. My mother seems able to do so in a very marked degree, for she is bright, cheerful, and hopeful, even now. Many of the friends say she can not hold out thus long, for it would be more than human to do so. I agree with them that it would be more than *human*, but still I think she will hold out, for she has something more than human to sustain her. Not that she has any privilege above the lot of mortals, for we all may have it if we will; nay, we may all have it as a free gift if we will only accept it. Is it not so? It did not seem quite natural for poor father to always have that same bright faith she has. Several days before his death, at a time when we thought he was dying, and while mother was talking to him about going home, he gave her a smile and a look so full of hope and peace that it seemed almost to belong to another world. This look will always be treasured by her; but afterward, when he rallied and seemed better, pain and sickness were with him again, and the bright hopes seemed somewhat to have gone. At this time his pastor visited him, and in his talk asked if the Savior seemed near to him. His reply was, "Sometimes." When near to death, the world, earthly things, and even his poor old body, were almost lost and forgotten, to such an extent that he hardly felt any pain. When he was better in body, the other world receded, and earthly trials came back. In all that I can recall of my father, I can think of no time when he held back the truth, even in the slightest degree, out of courtesy, or to avoid hurting anybody's feelings. His greatest fault was, perhaps, in letting the truth come out, no matter where it hit; and as he, like all the rest of us, sometimes formed uncharitable or hasty conclusions, this trait of his caused him to give pain, and perhaps make enemies, which a little more charity and mercy might have saved. Knowing this, I was rather glad to hear him speak, through his pain, the simple "sometimes." Few, very few, there be who can always feel the Savior equally near, and who can, through sickness and death, rise above the pains and toils of this mortal body; and in view of this I turn again to father's favorite chapter, the 103d Psalm, and read,—

> For he knoweth our frame; he remembereth that we are dust.

In these past Home Papers I have told you of one of the boys whom I called "Fred," and about his conversion and work in the mission Sabbath-schools afterward. As his was a spirit fond of adventure, and almost eager for danger, as it were, he held this same trait to a considerable extent after his conversion. For a time he set type for GLEANINGS, as you will remember. In his old life he had been on the railroads, and he seemed to have a longing for that kind of life still. On this account he had been, for the past year or two, in their employ. He had been promoted several times, and quite recently had been quite happy in having entire charge of a train of coal cars. He was getting pretty good pay, and as he almost invariably got his train in a little ahead of any of the rest, he would probably soon have been promoted still more. Well, but a very few days have passed since Fred lost his life, while running his train through in the night. An accident happened that threatened to endanger the lives of others, and in trying to save them, especially some new hands lately given into his charge, he was cut to pieces by the cars. You know how one's mind runs back over past events when one you hold dear is suddenly taken away. I want to tell you one of these. Fred and I had two mission schools started that seemed to promise much good. It was in the fall of the year, and we were discussing giving up one, because the days were getting so short. Fred said it seemed as if they must not be stopped, either of them. Then let us pray God to raise up some one to keep them going, said I. After a little silence, as we were riding home, said he,—

"Mr. Root, do you think it possible that I might take charge of the Litchfield school?"

"I do think it possible, Fred, with God's help, and I have been praying you might so see it."

It might have been a day or two afterward that I saw Fred had something on his mind. When it came out it was this:—

"Mr. Root, I think I could manage all at the school, except the opening prayer. Now, I want you to speak right out plainly. Would it be wrong for one who is not a member of any church, to open a Sunday-school with prayer?"

"I do not think it would be wrong, Fred, if you feel in your heart God would approve of your so doing."

As I had argued with him some on the importance of uniting with Christian people, and he had seemed to prefer to stand alone, I do not know but that he seemed a little surprised at me. I asked our pastor what he thought of my advice, and he warmly seconded me. Some thought otherwise, of course; but when I started for prayer-meeting Saturday afternoon, to my surprise Fred said he would go with me. I was more surprised when he said he was going to ask for admission into the church. Do you not see how God took care of it all? Sunday morning he was praying by himself alone in the factory. He told me he had been asking God to send some one to help him through with his first Sabbath. When he returned I knew by the light in his face that God had been with him; and he said that when he got to the four corners, near the schoolhouse, he looked up all four of the roads, to see who it was God was going to send to help him through with his school that Sabbath-day. While he was looking, a man on horseback came in sight, and it proved to be the minister from the center of Litchfield. He explained that it was impressed on his mind particularly, that morning, that he ought to go and see if his assistance was needed in the mission school he heard was started near his parish. The school built up and prospered. The minister mentioned came often, and another good faithful laborer came quite a distance to help, from an opposite direction. I went out to visit the school after a few weeks, and on expressing surprise to all turning out with such enthusiasm, this last friend said it was because everybody was touched to see one who had so few early advantages, trying so hard to bring souls to God. Said he, "Mr. Root, if you come out here I should not stir a step from home; but I can not see this boy work so hard and go unrewarded." Do you see, friends?

God chooseth the weak things of this earth to confound the mighty.—I. COR. 1:27.

At Christmas time they had a Sabbath-school concert, and Fred was presented with one of the finest Bibles in Medina county. In due time a prayer-meeting was started in connection with the school, and pretty soon preaching every other Sunday, and then a glorious revival that changed the whole atmosphere of public sentiment in that neighborhood. Several years have passed, but I am told the Sabbath-school is in progress still; and though Fred is dead and gone, his work and his memory still live.

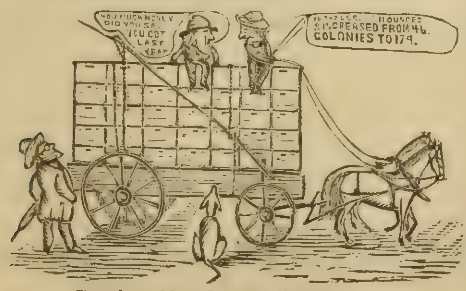
And they that be wise shall shine as the brightness of the firmament; and they that turn many to righteousness, as the stars for ever and ever.—DANIEL 12:3.

I wish also to add an encouraging word for the Home Papers. They reach many who would seldom see or read any thing tending to the higher or better life; and when we speak to any one calling their attention to this matter, we know not how long that word may be treasured, and perhaps bring fruit. I was once situated in New England, with every thing surrounding me that was pleasant; a fine lot and garden, good cottage house, grapery, etc., which I took care of in my leisure hours from the store, and of which I was proud. I was once showing my garden to an old friend; he looked it all over with pleasure, and as he turned to leave he said, "There is one thing lacking." I very well knew what that "one thing" was, and oh how those words haunted me for years! *He* never knew they bore fruit; but after 10 years and more, when I received the "peace that passeth all understanding," how fresh they seemed! So it may be with many of your words. May God give them weight, and send them to those who are ready to receive them.

NORMAN CLARK.

Sterling, Whitesides Co., Ill., Aug. 9, 1881.

Many thanks for your kind and cheering words, friend Clark, and may God guide us all through the year to come as he has through those that are past.


DID YOU SA.. YOU GOT LAST YEAR
POUNDS INCREASED FROM 46. COLONIES TO 179.

Getting Ready for 1882 !

GLEANINGS IN BEE CULTURE.

A. I. ROOT,
EDITOR AND PUBLISHER,
MEDINA, O.

TERMS: $1.00 PER YEAR, POST-PAID.

FOR CLUBBING RATES, SEE FIRST PAGE OF READING MATTER.

MEDINA, DEC. 1, 1881.

They that trust in the Lord shall be as mount Zion, which can not be removed, but abideth for ever.—PSALM 125:1.

YOU will never build yourselves up by tearing others down.

A VERY interesting report of the season's work came in from George Grimm just as our last forms were made up. It will appear in the Jan. number.

WE have now 203 colonies in chaff hives, and 10 of the number are divided by division-boards, and contain two small colonies. As we are still selling queens to some extent, we shall double up still more.

ON the 22d of Nov. we received from Charley Bianconcini 25 imported queens, and found 19 of them in fine order. Some of the lot were in nicer trim than we usually get queens in June or July. Don't you think that is pretty well for "Charlie"?

THOSE who have money deposited with us for bees and queens next season, are not only entitled to the first that are sent out, but also to any decline in prices should there be such. If there be an advance, they are entitled to the ruling rates when the order was made.

THE man who is always complaining of the world and the treatment he receives, you may set down as a rule, a bad man at heart; but he who has thanks and kind words for everybody, probably feels *himself* a sinner with the rest. Even Guiteau complains of his not being used fairly.

THE first page of the *American Bee-Journal* for Nov. 17 contains much valuable information, collected and arranged with considerable care; but had friend Newman explained to his readers in the outset that grape sugar and glucose are two *distinctly* different articles of commerce, it would have made a much better showing for your humble servant.

WE have, during the past season, sold pretty nearly, if not quite, 1000 lbs. of bees, for which we received at least $2000. We have also sold 2630 queens, for which we have received probably about $4000, counting imported queens and all. About 2300 queens were purchased, at a cost of perhaps $2000. As many as, say 300, were lost in shipping, so we have raised some 600 or 700.

WE close the year with 4189 subscribers, for which I can truly say, "Thank you," for it is a much larger number than I anticipated, after the disastrous losses of last winter. I do not know how many I shall have next year; but I do know that God is good, and that he will give me all the success and prosperity I deserve. Again I thank him and you too, through whom he has manifested his love to me.

Our basswood lumber is now all so well seasoned, that there is rather more danger of the sections breaking, than when it was not so dry; but if you will moisten the bends a little, according to the printed directions, you need not break one in a hundred. Mr. Gray will fold almost any of them *dry*, but it takes practice to do it.

We shall still hold to our offer of a watch for only five subscribers at one dollar each, but we omitted to say, last month, they must all be from one post-office. If you haven't the time, or don't want to be bothered running around after subscribers, just subscribe yourself for five years. Two, at least, have already got a watch in this way, and now they will have no bother about renewing the first of every year for at least "quite a spell."

As several of our friends who had occasion to return goods to us by mail have inclosed their letter to us with the goods, we wish to inform *all* that this is positively forbidden by the postal laws. Whoever conceals a letter in such a package, or in any kind of printed matter (unless he pays *letter postage* on the whole), renders himself liable to a penalty of $10.00. See Ruling 404, Jan., 1881, *Postal Guide*. It is permissible to write upon such packages the name of the sender, for purposes of identification, but nothing further.

We now allow a *three-cent premium* ("heavy," isn't it?) to any one who sends a dollar for Gleanings, with the postage on the premium, which is to be selected from our three-cent counter. We do it mainly to show you how good an article can be made for the trifling sum of three cents. Well, if you send the dollar before Jan. 1st, you may have, with the above, any article from the five-cent counter, providing you also remit for postage. Those having a credit with us can renew, and designate the articles wanted, by postal card. None of these offers are for Gleanings clubbed with other papers, or where any other premium is wanted.

A friend away up in Maine wishes us to put it to vote about having nothing in Gleanings besides bees. Most of you will remember that it *was* put to vote a few years ago; well, the overwhelming call to have the Home Papers kept up hasn't subsided yet, for in almost every mail comes "Go on with the Home Papers, Brother Root, and here is a dollar to help you along;" while the votes against them are so few I could almost count all that come in a year on my fingers. I am sorry I can not please even these few; but, my friends, is not a backing of over 4000 strong a pretty good reason for going ahead? If I were going to teach a boy the carpenter and joiner trade, I very likely should commence by telling him honesty is the best policy; but would anybody complain that this had nothing to do with the matter of sawing off boards?

The principal part of the rape seed we have sent out this season, for some unknown reason fails to germinate. As soon as complaints began to come in we gave it a test, and found one lot that would not grow at all. Fortunately, the amount we sold was but little; but it has taught us a lesson. If those who bought will notify us, we will willingly send more, or refund the money. It almost seems as if I ought also to pay for time, trouble, loss, and disappointment; but as losses will come, and delays are met in all kinds of business, which we are obliged to each one bear, it may be right to follow the seedsmen's custom, of being responsible for the cost of the seed, and no more. If I continue to sell seeds I do not know will grow, I hope you will stop trading with me; that's all.

FRIEND HILL'S DEVICE.

Neighbor Shane was taking his dinner in the lunch-room, and I improved the opportunity to "interview" him.

"Neighbor S., how did friend Hill come to send you that sample of his device?"

"Why, I wrote and asked him for one, of course."

"Asked him for one? Why, how in the world did you know he had such a thing?"

"Why, I read about it in Gleanings." And then he went on with his oysters and pie at a rate that reminded me if I wanted him to tell any very long stories, I should have to "wait a bit."

"Why, who in Gleanings ever mentioned friend Hill's device before I did?"

"Mr. Langstroth, to be sure; don't you remember?"

Then it came into my mind as clear as could be, and I didn't bother him with another word, but just walked right up stairs and got the book of Gleanings, and turning to page 320, July No., read,—

> I will send you, in due season, an unpatented device used by Mr. Hill for securing a warm nest above the clustered bees, which answers the end better than any one I have yet seen. Is there a man in all our northern country who can claim equal success with Mr. Hill in wintering bees!

No preventing providence, I shall be at Battle Creek on the early morning train (about 2 o'clock, I am told), on the morning of the 7th. The following is from the *A. B. J.*:—

MICHIGAN BEE-KEEPERS' ASSOCIATION.

The 13th annual meeting of the Michigan State Bee-Keepers' Association will be held in the City Hall at Battle Creek, on Thursday and Friday, the 8th and 9th of December. The time and place makes it convenient for those who wish to attend the annual meeting of the State Horticultural Society, which convenes at South Haven, the three previous days of the same week. The Michigan Central, Chicago & Grand Trunk, Detroit, Grand Haven & Milwaukee, and the Grand Rapids & Indiana Railroads will sell tickets to members at excursion rates. To secure reduced fare, all must have certificates, which can be furnished by the President, A. J. Cook, Lansing, Mich. Arrangements are made with hotels for fare at from 80 cts., to $1 per day.

The meeting promises to be the largest and best ever held. All bee-keepers are cordially invited to be present. Bee-keepers are requested to bring samples of honey, apparatus, and articles of interest to the apiarists The following programme has been arranged :

THURSDAY FORENOON.

"Italians bees," S K. Marsh.
"The new bees," D. A. Jones.
"Shall we contiuue to import queens?" Discussion opened by A. B. Weed.

AFTERNOON.

"Bees and grapes," H. D. Cutting.
"Mistakes of bee-keepers, Dr. E B. Southwick.
"Honey as food," Dr. J. H. Kellogg.
"The future honey market," T. G. Newman.

EVENING.

"Crumbs from the table of the National Convention," President's address.
"Adulteration," Dr. J. H. Kellogg.
"Apiarian implements," Hon. A. B. Cheney.

FRIDAY FORENOON.

"Rearing and selling queens," W. Z. Hutchinson.
"Foundation," James Heddon.
Address, A. I. Root.

AFTERNOON.

"Foul Brood," C. F. Muth.
"Extracted honey," Chas. Dadant.
"Hints," T. F. Bingham.
Election of officers and reports.

EVENING

"Wintering," O. O. Poppleton, D. A. Jones, C. F. Muth, and others.
Miscellaneous questions.

T. F. Bingham, Sec. A. J. Cook, Pres.

The Nebraska State Bee-Keepers' Association will hold its annual meeting in Ashland, Neb., on the 12th and 13th of Jan., 1882. A cordial invitation is extended to all interested in Bee Culture.

Geo. M. Hawley, *Sec.* T. S. Vondorn, *Pres.*

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Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

CLEVELAND.—*Honey.*—Choice white 1-lb. sections have advanced another step. We have been enabled to sell all consignments this month for 22 cts. per lb.; 2-lb. sections, 20 cts.; extracted, in 30 to 40 lb. cans, 12 cts.; in ½ barrels, 11 cts. *Beeswax*, 20@22c. These are the prices we sell for on commission; we do not buy.
A. C. KENDEL.
Cleveland, Ohio, Nov. 21, 1881.

NEW YORK.—*Honey.*—We quote honey as follows: Best white comb, put up in neat packages, 18@20c; fair, 15@17c; dark and buckwheat, 12@14c. We have no large boxes, therefore we don't quote them. Best white extracted honey, 10@11c; dark and buckwheat, 7@8c. *Beeswax.*—Prime yellow, 23@24c.
H. K. & F. B. THURBER & CO.
New York, Nov. 25, 1881.

CHICAGO, Nov. 23.

Honey.—For extracted honey there is a lively demand; but offerings, at prices quoted, are abundant. For honey in the comb, in single-pound sections, the demand is good, many preferring the 1-lb. sections to those larger. Honey in boxes, holding 4 to 12 lbs., is of very slow sale, and at a discount from the regular rate, of 2 to 5 c. per lb. I quote prices as follows: White, in comb, 1 and 2 lbs., 18 to 22 c.; extracted, white, 9 c.: dark, 8, if in small bbls. or kegs. Large bbls. are at a discount, as they can not be as easily sold or handled.
A. H. NEWMAN.

CINCINNATI, Nov. 23.

Honey.—The demand for extracted honey is very good, and the supply is fair. It brings readily 8 to 11 c. on arrival. Demand for comb honey is medium, to keep pace with the supply. A choice article brings 18 c. in our market on arrival. It retails from 20 to 25 c. per lb.

Beeswax is quoted from 20 to 22 c. C. F. MUTH.

DETROIT, Nov. 24.

Honey.—The supply and demand for comb honey are about equal. It is bringing from 18 to 20 c.

Wax, 20 to 25. A. B. WEED.

FOR EXCHANGE.

50 STANDS of Italian Bees for exchange for some in Canada or near. Address
12-1d A. W. SORY, Devall's Bluff, Ark.